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ABSTRACT

During 1971-72, the College of Education of the University of Toledo undertook the planning for the revision of the entire undergraduate teacher education program in the areas of secondary and elementary education. It was decided that the program should be performance based and interdisciplinary and should unite the urban educational institutions and agencies to effect significant educational innovation. Key elements of the program include interdisciplinary team teaching, modularized objectives, and full implementation. (Appendixes include Program Review and Evaluation Technique (PERT) materials; module format; sample instructional modules; and miscellaneous reports, reviews, and memoranda.) (Authors/JA)

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PLANNING FOR A PERFORMANCE-BASED TEACHER EDUCATION PROGRAM: A FINAL REPORT

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submitted by

The University of Toledo

to

Urban Affairs Committee
American Association of State Colleges and Universities
Washington, D.C.

August 1, 1972

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ABSTRACT

The College of Education of the University of Toledo undertook during the 1971-72 year the planning for the revision of the entire undergraduate teacher education program in the areas of secondary and elementary education. This involved the combined efforts of five departments within the College to develop an integrated program for preparing elementary and secondary school teachers. The goals of this effort focused on three fundamental characteristics:

1. The program should be performance-based. That is, objectives of the program should be specified publicly in behavioral terms with evaluation criteria indicating the desired level of performance. The emphasis would be on measuring student learning outcomes, rather than on completing a series of experiences or courses.

2. To assure a greater potential for synthesis, the instructional approach should be interdisciplinary, involving teams of instructors from five educational contexts planning and working together to bring about the desired outcomes.

3. The program should unite the urban educational institutions and agencies to effect significant educational innovation. Therefore, the College, the public schools of the Metropolitan Toledo area, and the community must form a workable coalition to meet the growing challenges of urban education.

During the funding period, the College built upon the original Ohio Model Teacher Education Design to bring about a systematic instructional program. Using a systems approach, the resulting program, which will begin full implementation in the fall of 1972, includes these key elements:

1. Interdisciplinary Team Teaching: Instructional teams were formulated to plan the means by which groups of students, organized into "mini-colleges" or "schools-within-a-school," would meet the objectives of the program which were agreed upon by those professors involved in the undergraduate program.

2. Modularized Objectives: The objectives derived from the Ohio Model and those generated by the departments responsible for the undergraduate program were synthesized into instructional modules and sequenced into either four (elementary education program) or two (secondary education program) "courses" which replaced the traditional course sequence.

3. Full Implementation: This is not a pilot or experimental program. It was agreed early in the planning that the implementation of the new program should be required of all students in the undergraduate program.

With the support of the College administration and the resources of the Sears Foundation, the faculty of the College began the difficult process of conceptualizing and operationalizing a fundamental program revision. Faculty retreats were planned to deal with program structure and instructional organization, and to bring about the necessary impetus

and affective approach to the change process. The formulation of self-selected planning and instructional teams was a significant step toward the fuller integration of ideas and concepts from all areas of professional education into the program. This brought about, further, a decentralization of the decision making process and created the conditions for the development of Teacher Education Centers within the Metropolitan Toledo area.

Dialogue with the public schools concerning the nature and rationale of the new program began during the winter. In an effort to synthesize the objectives of the program and the need for new and different field experiences prior to, and during student teaching, a coalition was established with schools in the city of Toledo and the surrounding area. Teachers and administrators joined faculty on retreats to lay the groundwork for the development of Teacher Education Centers, a group of multiunit schools in a variety of urban areas working in cooperation with an instructional team to translate knowledge into practice.

ACKNOWLEDGEMENT:

HOW MUCH CAN $10,000 DO?

In an era when grants in the hundreds of thousands of dollars are awarded to universities it is unusual to be able to attribute the fundamental reorganization of a teacher education program to a grant of "only" $10,000. In our original proposal we stated that we as a teacher education institution had begun the difficult process of change and that a grant of $10,000 would help us reach "critical mass." The Sears grant has been the key to our successful planning year and the initiation of full implementation of a new teacher education program in the fall of 1972.

Predicated on the premise that our faculty needed time and facilities for planning, the Sears grant was used exclusively for such facilitation. Retreats, resources, and secretarial help were the large items of expenditure. Faculty were quite willing to innovate and plan together without additional compensation if only the time was provided. The Sears grant afforded us that luxury. Without such aid little would have been accomplished.

In addition to the monetary resource provided by Sears, we had the good fortune of having as our site visitor, Dr. Howard Coron, of New York University. Not only did he visit and critique but he worked with us and indeed became part of our faculty when working with us. Seen not as a threat but as a helpful friend, whose advice and support we deem invaluable, we would like to acknowledge Dr. Coron's exceptional effort.

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I. ORIENTATION

Five years ago The College of Education, at the University of Toledo, in cooperation with a consortium of twelve state universities of Ohio began to design a comprehensive elementary teacher education model program. The design effort resulted in the development of educational specifications and instructional modules for three target populations, (1) elementary teachers, (2) administrative personnel (principals and supervisors in elementary schools), and (3) college and university personnel (the teachers of teachers). Since then the model has expanded to include the secondary teaching program, so that all of our education students will be taught through the Model program. The Ohio Model, as it became known, clearly stated that all groups of educational personnel who were actively involved in the education, induction, and support of new teachers were to be involved in training or retraining programs which dealt realistically with the contexts of educational change. These contexts of change we identified as instructional organization, educational technology, contemporary learning-teaching process, societal factors, and research.

Our strategy was an attempt to insure that new and re-trained teachers would receive intelligent and sympathetic support in elementary schools, minimizing future risks of teacher failure and general educational unresponsiveness to change. The failure of previous attempts to change teacher education has occurred partially because of preoccupation with preservice educational populations rather than proper attention to <u>all</u> populations involved with schools.

The Ohio Model project resulted in other basic assumptions about

teacher education which have been reported in Educational Comment/1969: Contexts for Teacher Education, pages 24-28. Fundamentally, the Ohio Model advocated a renunciation of the self-contained classroom concept in elementary education and the utilization of the multiunit school and team teaching approach (which has become a national U.S.O.E. thrust) developed by the Wisconsin Research & Development Center for Cognitive Learning. The Ohio Model put a heavy emphasis on activities that involve a continuous cooperative and coordinated effort with public schools.

Paralleling model development, the College of Education through its Center for Educational Research and Service (CERS) began inservice programs with public school systems in the Toledo metropolitan area to introduce and support educational innovations. One aspect of this activity was the development of multiunit schools. Ten of these schools in four school districts were operative as of September 1971. A major effort with this concept occurred in the heart of Toledo's inner-city and has been ongoing since 1967. An informative report of this effort will be found in Educational Comment/1971, The Ohio Model and the Multi-Unit School, pp. 33-68.

The need for reform in elementary and secondary education in the United States has been thoroughly documented in numerous addresses and publications, the latest of which has been Charles Silberman's book on Crisis in the Classroom: The Remaking of American Education. Severe problems exist in the areas of reading, the "irrelevance" of much that is offered by educational institutions to their clients, and the seeming inadequacy of present students to conceive and develop proper attitudes about "work" including occupational preparation and planning. The revolt of school patrons and taxpayers is almost a daily newspaper item. State

legislatures and the national Congress are increasingly concerned about putting new funds into the same old educational operational patterns. Educational discussions concern such concepts as educational accountability, performance-based education, criterion referenced programs, descriptive phrases which connote a demand for educational goal clarity and acceptable indicators as evidence of the realization of such goals. It is clear that schools have failed to provide systematic evidence on the relationship of program costs to program benefits and Silberman's concept of the "mindlessness of American education" captures very well the characteristics of a total system that is in a serious state of disrepair.

H. Del Shalock, in a working paper prepared for Task Force '72, has captured the essential shifts in education which must occur if we are, indeed, to address ourselves to meaningful reform in education. He speaks first of the shift from an experience-based to a performance-based mode of operation. Experience-based education simply provides experiences for students with little regard for what results from such experiences. We need performance-based educational programs where the outcomes expected to be derived from them are specified. Performance-based programs do not deny the significance of experience but they openly recognize and treat experience as a means rather than an end.

Second, Shalock advocates a shift from a primary focus upon knowledge and skill mastery to a primary focus on output. This essentially calls for reconsidering our heavy reliance upon knowledge as the primary basis for educating teachers and beginning to focus upon what teachers can do with what they know. "Doing" fundamentally means being able to perform specified teaching behaviors. This is increasingly being considered as a more reasonable basis for teacher certification.

Third, there should be a shift from an essentially data-free to an essentially data-dependent mode of operation in education. The call here is for more information about teachers and teaching and the use of it so that the instruction-learning experience can become more effective.

Fourth, there should be a shift from an essentially training function to a research development and training function. The proposition with this shift is that performance-based, output referenced and data-dependent training programs provide the best possible context within which to mount research and development efforts that will provide answers to ways of establishing more efficient educational systems.

Fifth, there should be a shift from an essentially impersonal instructor oriented learning environment to one that is personalized and student oriented. The plea is for a greater opportunity for individualization and personalization.

Sixth, there should be a shift from an essentially college or university centered program to a field centered program. This calls for the establishing of close and continuing contact on the part of universities and school systems in the operation of preservice and inservice educational activities.

A seventh and final shift calls for movement from a relatively narrow and essentially closed decision making base to one that is broad, in which decisions within the institution must be shared by all involved in the educational process.

We think we have some answers to what we want children to learn, how we want them to feel or believe, and what we expect in children's abilities. We have looked at the kind of school (multiunit school) which we think it will take to achieve our desired ends for learners. We know

how to convert schools from a self-contained to a multiunit or differentiated staff type of organization, but changing the organization is insufficient. We must concentrate more explicitly on how to teach teachers to teach in a differentiated staff situation; how to individualize, personalize and modularize instruction; and how to manage and evaluate such effort. Hopefully, with the latter concern, we can develop the concept of "synthesis accountability" in terms of bringing together the measurement of the validity of public school programs and the validity of teacher education programs which would involve data concerning pupil outcomes and the concomitant data involving teacher education student outcomes.

II. PROBLEM

The complaints students level against most Colleges of Education are legion and suffice it to say that we have been guilty of many of those charges, each of which we discuss below.

A. Communications Among Faculty

While we believe we have had a faculty with a great deal of willingness to interact, we have suffered from the problems of duplication of content, ommitting essential prerequisites in course hierarchy, and utilizing confusing and inconsistent terminology. This has happened not because professors have intended to confuse students but because our classrooms have been self-contained and course planning across disciplines has been minimal. Each of us has not been aware of what others are doing. The unfortunate consequence of this has been the loss of valuable input of individual professors who have engaged in significant program development in their classes but which has been lost because of insufficient communication or forgotten when that professor leaves for some other position inside or outside the university.

B. Feedback To Students Inadequate

While we believe that data should be supplied in abundance concerning their skill attainment, etc. feedback to our students has been delayed because of the cumbersome evaluation procedures we have been using. Inadequate feedback has also been a problem because most professors tested only once or twice during a course.

Compounding this problem is the lack of objective criteria as well as the ambiguity of most goal statements.

The problem of inadequate feedback also relates to our field service component. Cooperating teachers are not aware of specific objectives the College has attempted to teach. The typical student teacher thus models himself after the cooperating teacher and tends to disregard college training. One of the reasons for the latter condition is the paucity of college supervision and nebulous criteria for evaluation of teaching. Thus the "theory-vs.-practice" dichotomy was not only created but reinforced.

C. Little Career Orientation Provided to Student

Most of our students first entered a public school classroom as a prospective teacher at a point of no return in his program. Student teaching, the first major field component, was usually the last requirement and in most cases much too late to make a career choice requiring a different curriculum. The student has been left on his own to gather data outside the College concerning the relevance of his choices or indeed the kinds of choices he may make: elementary teaching? junior high? high school? inner city? rural? need for second language for teaching? etc.

D. Norm Referenced Grading

While we have taught about individualizing instruction and have promoted "schools without failure" we have operated under the very system we have verbally attacked. Norm reference evaluation builds in failure and forces students to "beat the system"

rather than concern themselves with substance. The competition for grades limits the interaction among students and places undue emphasis upon the grade rather than the competence. We have held time constant (10 week quarters) and allowed achievement to vary.

E. Evaluation

Faculty in the College of Education are rated by their students twice a year and the results of those evaluations have been used in salary and promotions deliberations. While this has been a reasonable first attempt to reward good teaching in addition to publishing, etc. the data is soft. We would prefer to make inferences about effective teaching based upon student achievement and begin to look at the relationships between a specific professor's teaching strategies and his students' outcomes.

F. University-Public School Relations

We have been fortunate that we have had an exceptional relationship with the public schools. With the increased demands we wish to make on the public schools in the training of teachers we see the problem of communication as being critical. We are now requiring each of our students to go into public schools in every course experience offered in the undergraduate program. Schools are getting calls from a variety of college personnel requesting the use of public school pupils and classrooms.

III. NEEDS

A. Communications Among Faculty

The need to reorganize our faculty in terms of de facto working relationships was evident. The need to establish interdisciplinary teams was established. The need to rewrite our objectives in behavioral form, and make them public was agreed to. We have hypothesized that these two items would facilitate the creation of a more open, consistent and educationally defensible curriculum.

B. Feedback To Students

In an attempt to individualize instruction, the flow of data between student and teachers needs to increase enormously. We have established the need to develop a system to handle such data flow through the use of scoring machines allowing students to gain immediate feedback on specific types of test items and computer facilities to print out where each student is in relation to each of the objectives he has met and has yet to meet.

We have agreed that we need to maximize our in-school supervision of our students and we have resolved that each faculty member will have some supervision in public schools as a component of his teaching load.

C. Career Orientation

The need to provide data and experiences early in the college career of our students concerning choices in educational careers was evident. Our newly developed Career Decisions Seminar is an attempt to fill that need. (See Appendix N)

D. Norm Referenced Evaluation

The movement to competency-based teacher education requires that we employ criterion-referenced assessment in addition to giving data to students as to where they stand in relation to someone else. This requires that objectives be specified in measurable terms with criteria for success made explicit and public. The need is to not only write relevant and valid objectives but also to write reasonable and appropriate criteria. Since this cannot be guaranteed in initial writing it is necessary to be able to gather data to support the validity of the objectives and the criteria. This task, of course, relates to the need of a data management system.

E. University-Public School-Community Relations

There is a need to improve articulation of university and public school objectives in teacher training. This includes the need to agree on the mechanisms which have to be developed to carry out those objectives. The university must also begin to plan more comprehensive programs in community education, to train paraprofessionals and provide vehicles for the community to have greater input with regard to teacher training in the community schools.

The above reflects our determination to create a SYSTEMATIC teacher education program. This conceptual base demands that data be gathered, fed back into the system and the program revised when such revision is required. While faculty still make arbitrary decisions regarding appropriate objectives, strategies, and criteria, the difference lies in the fact that these decisions will now be made with faculty interacting, and that objectives, strategies and criteria

are now public and written in forms which are measurable and hence revisable. In this regard we are publicly ACCOUNTABLE and behaving as models for pre- and in-service teachers.

IV. GOALS

A. To develop a Career Decisions component which will provide data early in a teacher candidate's program for deciding if he really wishes to go into teaching and into what area of teaching.

B. To systematically develop an integral, modularized, revisable competency-based teaching program for elementary and secondary teachers.

C. To unite the university, the local school agency, and the target school community in both the education of children, and the education of prospective teachers.

D. To document the process of accomplishing the above objectives, so that the process will be transferable to other similar institutions.

V. OBJECTIVES

A. To systematically develop an integral, revisable, modularized, competency-based program for preparing elementary and secondary teachers.

1. To get agreement "in principle" from a majority of the administration, faculty, community educators, and students in the teacher preparation program, that the goal above should be pursued.
2. To establish the major areas to be included in the program; (societal factors, instructional organization, educational technology, teaching-learning process, and research).
3. To write objectives for the major areas, in a measurable form.
4. To write criterion instruments for the behavioral objectives.
5. To write modules in a common format, including: list of prerequisites, pretests, behavioral objectives, means for accomplishing objectives, directions to students, references, and posttests. To establish instructional development teams from among the faculty and students.
6. To sequence modules in terms of prerequisites, concurrent, and successor modules.
7. To PERT the instructional development events (to be periodically revised).
8. To pilot test the individual modules.
9. To revise the modules on the basis of the evaluation data from the pilot test.

10. To form instructional teams with specific roles.
11. To design a strategy for accomplishing the goals.
12. To design a management system for the implementation and coordination of the program.
13. To fully implement the program.
14. To design and develop a management system for assessing and revising the program.
15. To select means for accomplishing the objectives.

B. To unite the University, the local school agency, and the target school community in both the education of children, and the education of prospective teachers.
   1. To get agreement "in principle" from a majority of the administration, faculty, community educators, and students involved in the teacher preparation program, that the goal should be pursued.
   2. To design and develop a strategy for accomplishing the above goal.
   3. To determine the extant and unformed organizations, and individuals who are, or may be, decision-makers and/or gate-keepers that can facilitate or hinder the accomplishment of the above goal.
   4. To develop formal communication links between effected individuals and organizations.

C. To document the process of accomplishing the above objectives, so that the process will be transferable to other similar institutions.

1. To record the effects (both successes and failures) of alternative strategies.
2. To schematize the instructional development system components and processes, making dated revisions whenever appropriate.
3. To make all data available to other colleges involved in similar ways.

VI. STRATEGIES

A. Change Strategies

No one existing change model was adopted, but rather an eclectic combination of those organizational change models identified by Greiner (reported by Warren G. Bennis, et. al. The Planning of Change. Holt, Rinehart, and Winston. New York. 1969. pp. 82-83.), used in conjunction with emerging heuristics of our own.

1. The Decree Approach. One-way decisions originating with a person of high formal authority, have been used sparingly throughout the program's development. This model was used most intensely at the initiation of the program where, for example, the Dean decided that the College of Education would develop and implement a competency-based program, and that certain people would be responsible for developing specific parts of the model. As the faculty have become more involved this model has become less useful. It is used presently for the primary purpose of breaking deadlocks among faculty groups, and for determining policies clearly within the Dean's responsibility.

2. The Replacement Approach. Individual faculty desiring not to participate in a competency-based program have tended to select themselves out of the College in some cases, or to accept other unrelated College responsibilities. Replacement for these and other faculty lost due to normal attrition have been selected on the basis of qualities and attitudes favorable to the new program. It is expected that this process will continue until the model program is fully manned. New faculty are selected on the

basis of willingness to work within a competency-based approach, and who have particular skills needed, whether they be subject-matter or process skills. As an example, candidates having a strong bias toward behavioral objectives, a systematic development of instruction, or criterion referenced measurement, tend to be favored. However, faculty members having a negative view (for a variety of reasons) of the competency-based model are encouraged to stay. They serve certain traditional functions retained in the model or they accept responsibilities in the College outside of the model. It is a strong feeling among the decision-makers within the College, that, unless the Model can successfully make room, and take advantage of diverse philosophical and learning orientations, the system will be less than desirable.

3. The Structural Approach. Initially, the changing of the traditional relationships among faculty and staff (for example, the formation of developmental and instructional teams) is viewed as a powerful means of encouraging the implementation of the model. But like the Decree Approach, this change model is imposed less and less as the faculty assumes an increasing degree of responsibility for determining appropriate structural changes. At the outset, the hueristic of "always working within the present structure whenever possible" tended to maintain the traditional College organization. For example, each Department was asked to develop those modules the Department regarded as important. Since the resources and the authority for allocating them resided in the Departments this procedure made pragmatic

sense, but as faculty teams began to form, the decision-making function began to shift to the teams as a result of formal faculty decisions made through the traditional mechanisms for doing so. The effect is that the Departments have become less and less important in undergraduate education, and will likely have most of their function assumed by the interdisciplinary instructional teams consisting of College and public school faculty and students.

4. The Group Decision Approach. In this approach, obtaining group agreement to implement decisions and solutions determined by others, is emphasized. While most of the early structural changes were designed and imposed by authority, in almost every case the faculty was asked to ratify them. In some cases this meant faculty "accept in principle," and that a few of the favorably biased faculty actually did the implementing. This "rubber-stamping" of decisions has decreased considerably as the faculty has assumed more and more responsibility for making decisions.

5. The Data Discussion Approach. This approach depends upon continuous presentation and feedback of relevant data to those involved in the development and implementation of the model. The early decision of the coordinators to provide faculty with all of the data proved unreasonable. The only way that the faculty could be expected to process all of the data would be to spend time comparable to that spent by the coordinators. The compromise position was for the coordinators to determine what specific information was needed by what faculty member in order

to carry on their part in the model, and to see that they received that information. At the same time, the coordinators agreed not to withhold any information that faculty members might ask for. This compromise position created problems for two reasons: (a) the coordinators could not always determine accurately what information was needed and suffered a credibility lapse when faculty viewed their failure as withholding information they should have had access to, and (b) faculty were not able to ask the right questions to gain access to additional data that the coordinators were willing to provide. The rising sophistication of an increasingly involved faculty has reduced this problem considerably, and as a result the teams do more and more of their own analysis of data relevant to the model.

6. The Group Problem Solving Approach. The identification and solving of problems through group discussion and special outside help is the change model toward which our process of "successive approximation" is aimed. However, we expect that the other models mentioned above will continue to be used, some for short period (1 and 2), while others will continue as we synthesize those elements of the change models that are most useful to our unique situation.

Finally, one aspect of our strategy, implicit in much of the reporting above and perhaps explicit in the adoption of a systematic approach, that needs to be emphasized at this point, is our determination to depend on the assessment component to provide data on how the program should be revised. This includes value judgements about the content and processes selected, as well as revision and

deletion of objectives, means of accomplishing objectives and criterion instruments. We are fully cognizant that our selection of content and process for the model was the result of intuitive, experiential, and territorial decisions. We believe that the assessment component that we have designed will keep the managerial and instructional processes visable, and provide the necessary data and mechanisms to insure continued revision of all aspects of our instructional model.

Because of limited resources we (the coordinators) could not, as a faculty, carry out the design, development, implementation, and assessment that we ideally required. In fact, we could not even meet minimal requirements that would permit us to start with verified systems to meet our three goals.

The alternative to the ideal systematic development, was what we choose to call a system of "successive approximations." Basically, this means that after delineating clearly what the final condition of the desired program should look like, we would use any alternatives that approximated the ideal, with the understanding that we would continuously revise toward that ideal. For example, it would have been most desirable to have our purposes stated operationally, sequentially and hierarchially, and matched with appropriate learning conditions, and with the appropriate taxonomic categories. But we were willing, initially, to settle for objectives that included the Magerian criteria of performance statement, conditions under which objectives will be met, and means of assessment. However, we then developed a schedule to bring these objectives to the ideal state by "successive approximations." After the first

cycle we would discriminate between terminal and enabling objectives, after the second cycle we would match the objectives with taxonomic categories and write new objectives for those categories that should have been covered. After the third cycle, we would match the objectives with appropriate learning conditions (a la Gagne), and so on until the objectives were in the most useful state necessary to carry out all of the elements of our program.

The key component for a management system under the restraint of "successive approximation" is assessment. Conditions required for an ideal performance-based teacher education program act as a focus for assessment, and for decisions regarding assessment outcomes. Change in our instructional and management systems, then, depend upon the assessment of objective data, and revision processes channeling the data.

Since the operationalization of "performance-based," or competency-based instruction requires that the learner master, at a minimal level, prerequisite behaviors before continuing to successor behaviors, we are, in essence, required to "manage by objectives." The instructional program and the management system then, will change on the basis of how well objectives of the two systems are met.

The following are conditions required by the management system using successive approximations as a focus:

1. Goals of the management system are operationally stated.
2. Policies and rules controlling management decision-making are operationally stated.
3. The decision-making models used by the management system are operationally stated.

4. Components of the management systems are operationally defined.

   A. Functions of each component

   B. Relationship among components

5. Means for assessment of management system are operationally stated.

6. Means for revision of management system are operationally stated.

The following are required components of the management system:

1. Analysis

   A. Determination of variables and constraints

   B. Determination of managerial tasks

2. Synthesis

   A. Development of alternative solutions

   B. Cost/effectiveness comparison of alternatives

   C. Selection of most appropriate alternative

3. Implementation

   A. Quantify specifications for selected alternative

   B. Develop and field-test prototype

4. Communication

   A. Cognitive and affective guidance of faculty and students

   B. Assessment and revision feedback mechanisms

5. Information handling

   A. Data collection

      1. For program revision

      2. For modular revision

      3. For management system revision

      4. For student advisement

B. Data manipulation

1. Statistical

2. Rearrangement and juxtaposition

C. Data distribution

6. Evaluation

A. Validating processes against instructional and management systems goals

B. Generation of new management tasks

7. Logistics

A. Scheduling of staff, students, space, materials, and equipment (Program Evaluation and Review Technique)

8. Resource allocation

A. On the basis of instructional and management systems objectives (PPBS)

(See Appendix C for a schematic representation of the Management System process.)

Like other aspects of our management model, the formal organizational units listed below are in transition. All of them are, or will be modified, some will be dropped out of the model, and others will be added.

1. Legitimizers

A. Dean of the College of Education

B. Division Directors of the College of Education

C. Department Chairmen of the College of Education

D. College of Education Faculty

E. Student Representatives

F. Cooperating Elementary and Secondary Schools

2. System Coordination

A. College Administrative Council

B. Systems Design Coordinator

C. Elementary Program Coordinator

D. Secondary Program Coordinator

E. Instructional Team Leaders (vary depending on modules)

F. Field Experience Coordinator

3. Work Committees

A. Module Writers and Modifiers

B. Assessment and Evaluation Program Developers

C. Schedule and Facilities Developers

D. Module Sequencing Group

E. Materials Collection Group

VII. TASKS AND ACTIVITIES

Program tasks were carried out usually under two conditions: on the job, and small and large group retreats. Initially, the coordinators spent an inordinate amount of time attempting to involve all faculty. They found that, while some faculty members would readily accept an assignment, they either lacked the skills to carry it out, or for other reasons decided not to complete the task. The coordinators hypothesized a number of reasons for the latter groups failure to complete the assigned tasks, ranging from competition with the faculty member's personal objectives, to a philosophical difference as to the value of the task. The coordinators made the decision that they could not afford the energy expenditure required to proselytize recalcitrant faculty, and decided that as soon as they had identified such faculty, they would stop depending on them for task completion. This was regarded as justifiable on the assumption that, as the development of the model progressed, faculty would become involved, either because the structure of the college organization encouraged it, or because of the influence of other faculty working in the model. The assumption has been justified, as evidenced by the increased participation of all faculty.

On-the-job task completion. Initially, in obeying the heuristic of working within the traditional mechanisms of the University and College organization, the coordinators worked primarily with Department Chairmen who then were responsible for making task assignments. However, the coordinators reserved the right to work directly with the individuals or groups assigned by the Chairmen. Later as instructional

development teams were formed, the coordinators worked directly with them, without going through Department Chairmen.

Task completion through small and large group retreats. While on-the-job task completion was necessary, the most productive periods resulted from the small and large group retreats, which the Sears Foundation Grant made possible. On-the-job tasks tended to go far beyond task completion dead-lines, because of the many other responsibilities of faculty on campus. But the carefully planned retreats insured that the faculty members would be able to concentrate without the usual interuptions on the tasks designated for a particular retreat. The retreats varied from one team pulling itself off to a conference room in a motel for a day, to a three day retreat for the large percentage of the faculty involved in the model development. Most of the major structural changes were made at these meetings.

The major tasks were identified and sequenced using a modified Programmed Evaluation and Review Technique (PERT) as illustrated in Appendix C. Each major task to be accomplished was identified and planned in terms of its accompanying activities and or related subtasks, and criteria for determining the degree to which it was completed, and when the task needed to be finalized. The following seven major tasks are described below.

1. Establish Coordination Component

It was necessary, at the outset, to form a coordination component that would provide the following functions:

A. To serve as a communication link among the various individuals, departments, administrators, and organizations involved in the model development;

B. To provide responsive and effective feedback to the individuals, groups, and organizations;

C. To develop alternative ways of solving development problems and to communicate to the necessary individuals these alternatives;

D. To provide an in-service and "trouble-shooting" function as needed;

E. To facilitate the making of decisions by faculty groups; and

F. To generally coordinate all model development and implementation activities.

It was determined prior to the end of spring quarter, 1971, that there should be three coordinators -- a general coordinator of model development, a secondary program coordinator and an elementary coordinator -- selected on the following criteria:

A. General Coordinator

1. Knowledge and skill in systems development
2. Curriculum background
3. Knowledge and skill in communication techniques
4. Administrative ability
5. Cognitively and affectively involved

B. Elementary and Secondary Coordinators

1. Curriculum background in elementary/secondary education
2. Knowledge and skill in communication techniques
3. Perceived leaders in their areas
4. Administrative ability
5. Cognitively and affectively involved

These three individuals were selected by the Dean of the College of Education. Because the College of Education was in the process of a basic administrative reorganization, each was identified as the chairman of their respective departments, thereby strengthening and/or legitimizing their administrative role within the College.* The decisions were made and announced during May, 1971.

* See Appendix for College administrative organization.

2. Determine the Scope of Educational Objectives

The basic groundwork for determining what would be the educational objectives of the undergraduate teacher education program had been established in 1967-68 with the completion of the Ohio Model Design and Feasability Study. Educational objectives or specifications were developed covering five "contexts" for teacher education: Instructional Organization, Teaching-Learning Process, Societal Factors, Educational Media and Technology and Research. Therefore, the second major task was to select from the original study those objectives perceived to be most relevant to an Elementary or Secondary Teacher Education program, as well as to generate objectives perceived to be necessary but not included in the original study. Finally, it was decided to translate and synthesize the objectives/specifications into instructional modules.

Early in the fall of 1971, an administrative committee made up of the three coordinators and department chairmen from areas involved in the undergraduate program was formed to plan the most effective means of accomplishing this task. Each department, it was decided, should be responsible for selecting and, where needed, generating the objectives most relevant in the view of that department. The coordinators provided assistance where needed to help faculty develop all necessary and sufficient objectives in modular form. The format for the instructional modules was developed and modified by the coordinators and agreed upon by the staffs of the related departments.

The basic elements of the modules included (a) name of context/department, (b) title/topic, (c) all objectives, (d) pre-requisite modules, (e) a pre-test, (f) suggested treatments, (g) related materials, and (h) criterion items. For a fuller description, the complete module format used is included in Appendix D.

During this time, faculty met as departments, in curriculum area groups, and individually on campus and off campus to complete the writing.* It became evident that several problems were emerging. First, not all faculty were equally capable of articulating their goals in behavioral terms. Second, there were some initial difficulties in communication among professors, though thankfully this was at a minimum. Finally, the degree of commitment to the task was not equal among the staff, nor was a basic change of the undergraduate program perceived to be a finality. That is, at this time the "old" courses were scheduled as usual for the next year (1972-73) making it difficult for some to see the purpose of this rewriting activity. Nevertheless, it was made clear that the goal at this time was an approximation of modules, that time and resources would be available to refine and revise these first attempts over the following six months, and that next year's program would be different and those differences would be decided by the faculty.

At the beginning of December, 1971, each department provided the coordinators with a set of instructional modules for their area of educational context. While all modules were not complete or refined documents, they represented, in their entirety, the total scope of objectives for the program in the judgement of the staff responsible for the undergraduate teacher education program.

3. Revision of Course Schedule and Credits

The preliminary scheduling of classes at the University of Toledo takes place at least six months in advance of the term. This constraint, in addition to the perceived necessity of formally committing the College

* See Sears site visitor's report in Appendix G regarding one such meeting.

to a revised program in the fall of 1972, required the decision during late December to revise the proposed scheduling of traditional courses. Working with the Dean of the College, all department chairmen, and University scheduling officials, the traditional courses required in elementary and secondary teacher education professional sequence were eliminated and replaced with either two eight-hour "courses" (for secondary education majors) or four eight-hour "courses" (for elementary education majors). These courses, together with the Career Decisions Program (a two-quarter block required of all freshmen) and the student teaching component comprise the Professional Education Program in the College. (A complete description of requirements in both elementary and secondary education are included in Appendix I.)

To allow for greatest flexibility of staff and time utilization, these "courses" were scheduled in four-hour blocks two days each week. To structure the courses so that students could take other courses outside the college, they were scheduled on Tuesdays and Thursdays because of the usual Monday-Wednesday-Friday sequence in other Colleges. Finally, to permit field experiences in the public schools, the courses were scheduled either all morning (8:00-12:00) or all afternoon (12:00-4:00).

It should be noted that neither the "content" nor the staffing of these "courses" was determined. However, the process of preparing instructional modules underway at this time took on greater relevance and importance; there remained the decisions concerning how to package and program the objectives and organize appropriate staff for instruction. Nevertheless, at the beginning of winter quarter, 1972, the development process was approaching "critical mass."

4. Development of Instructional Organization

Basic to the development of an innovative program is the concrete sense of participation by those involved and responsible for such a program. That is, the sense of commitment is strengthened and the willingness to participate and contribute is enlarged as individuals understand, in very real terms, what specific role they are to play in the eventual program. Up to the beginning of the winter quarter of 1972 the staff did not have this concept of where each "fit" in the new program, because the faculty had not yet made the decision concerning instructional organization.

Nor could this decision be made without at least an initial conceptualization of the overarching scope of the program -- the total curriculum, the objectives/specifications or the topics to be included in the package. Much thought and discussion took place among the coordinators and with the staff concerning which should come first: the conceptual instructional "package" or what goes into the package. Both place constraints on each other and, as it finally emerged, must evolve in parallel fashion.

The first College retreat took place February 3-5, 1972, to focus on three fundamental questions:

1. What will be the structure of the Professional Education Program?
2. How will the faculty organize for instruction?
3. What will the content and sequence of the program?

Approximately sixty members from six departments involved in undergraduate education attended the retreat held at Walden Woods Conference Center in Hartland, Michigan, approximately 70 miles from Toledo. The

role of the coordinators was to plan the agenda,* make the arrangements, and to facilitate faculty decision making. The Dean of the College of Education and the Assistant Dean for Finance were invited to provide data concerning University, College and financial constraints within which decisions could be made. The following basic decisions were made at this time:

1. Instruction would be by interdisciplinary teams of instructors. Membership on a team would be voluntary, self-selected, and would provide a representative from each of the educational contexts.

2. The elementary and secondary programs would develop separately, but would be coordinated in such a way as to combine resources where the programs overlapped each other. The content and sequence of the two programs would be determined by members of either the elementary or secondary teams.

There is no way to fully and adequately describe the affective value of this initial retreat. (A copy of the Sears site visitor's report of his observations is in Appendix G.) However, it can be said that for the first time faculty communicated with each other, argued, conceptualized and reached closure on the fundamental structure of the program to a degree previously impossible. It was during this time that the impetus for the arduous work to be accomplished before fall quarter of 1972 was created.

Following the retreat the secondary group agreed to work as one large team to plan the secondary program and, once conceptualized and articulated, to then organize themselves for instruction.

The elementary group agreed that three teams would be formulated for the purpose of both planning and instruction; further, that the make-up of the teams, therefore, was crucial. The elementary coordinator,

* A copy of the agenda is included in Appendix G.

it was agreed, would solicit from each staff member involved in undergraduate education responses to a questionnaire indicating (a) if he wished to work with an elementary team, (b) what areas he felt competent to deal with, and (c) with whom he would like to work. The coordinator formulated the teams on the basis of the responses. No revisions were necessary. (The questionnaires were destroyed to assure confidentiality.)

5. Determine Minimal Objectives

The three elmentary teams were charged with reviewing all modules and

1. Selecting those modules judged minimally necessary,
2. Identifying areas where modules had not been written and were needed, and
3. Identifying those modules that were optional in the program.

Each elementary team completed their task by the first week in April, 1972. Two representatives from each team and the elementary coordinator met on April 15, 1972 to synthesize the recommendations from each team and reach consensus on two points:

1. What would be the minimal "core" modules?
2. What would be the quarterly sequence of modules for the four eight-hour "courses?"

It was agreed that the sequence of each quarter's modules within each quarter would be left to the team responsible for instruction during that quarter. In short, then, after six months of writing and synthesizing by departments and teams, the scope and quarterly sequence of the undergraduate elementary education program had been accomplished.

A second key decision made as a result of the February retreat concerned the placement and organization of students. The elementary

teams agreed that students would move through the four "courses" as a group and that the instructional team would likewise "move" with them. That is, each team would be responsible for the entire Professional Education Program for one group of students, thereby creating a "mini-college" or "school-within-a-school." Each team and group of students would work with the same objectives and criterion items, but would modify or generate treatments consistent with the uniqueness of students, instructors, and cooperating schools.

It was recognized that not all students would proceed through the program at the same pace and some students would have to be "recycled," receive remedial assistance, or switch teams. However, the perceived advantages of continuity of instructors, knowing the field settings more completely, and creating a more adequate advising system outweighed the inevitable logistical problems.

6. Determine the Instructional Program

A. The Elementary Program

Each instructional team was assigned to one of the four "courses" for fall, 1972, and were to plan the instructional program for meeting the already agreed upon modules for that quarter. With three teams and four "courses" to be taught, it was agreed that each quarter one team would work with two groups of students. The organization of this plan can be diagrammed as follows:

	Team A	Team B	Team C
Fall Quarter, 1972	Courses I, IV	Course II	Course III
Winter Quarter, 1973	Course II	Course III	Courses IV, I
Spring Quarter, 1973	Course III	Courses IV, I	Course II

As can be seen, the teams maintain continuity of students by following through the sequence of courses. Since the objectives of "course I" and course IV" require sufficiently different sets of instructional objectives, it was decided to pair these two "courses" together.

Armed with at least an approximation of the modules, it became the team's responsibility to polish and revise the treatments, statement of objectives and criterion items -- or seek the assistance of a staff member who could. Further, it was the responsibility of each team to plan the instructional organization for achieving the desired learning outcomes. A second retreat was held during May, 1972, to free faculty teams to complete this task. Rather than a retreat to conceptualize, the focus for this retreat was the working together as teams to plan, organize, write and revise.

B. The Secondary Program

The secondary group decided to work as one group (18 faculty) for the purpose of continued planning. The second retreat in May was used by the secondary group to identify the minimal "core" modules and to sequence the objectives across the two "courses" that comprise the secondary professional education program. The secondary program comprises three consecutive quarters (in addition to freshman Career Decisions) with the first two quarters a Tuesday and Thursday "course" meeting for four hours (8:00-12:00 or 12:00-4:00) each day. These 8-credit hour courses were so scheduled in such a way as to allow students to fulfill module requirements in the field when necessary. The third quarter consists of full time student teaching for 15 quarter hours of credit.

Rather than follow the pattern of the elementary teams approach, the interdisciplinary secondary education faculty members (Methods, Educational Technology and Media, Social and Philosophical Foundations, Educational Psychology) decided to exist as one large team and differentiate functions relative to module requirements across both courses and supervision of student teachers. Here it is important to note that all faculty engaged in the elementary and secondary programs have agreed to work in the schools with our students.

7. Orientation of Students

The revision of the teacher education program created a number of problems regarding reallocating credit hours in the total undergraduate program, working out a "phasing in" strategy, and informing all students and staff as to the nature of the changes. The new program resulted in the addition of eight hours in the professional sequence and a readjustment in the number of required hours in non-education areas. These revisions were voted on by the College faculty as a whole. An addendum to the College of Education Bulletin was written to be included with the 1972-73 Bulletin. (A copy of the Addendum appears in Appendix I.)

Because students in the College had taken some courses in the previous program, a system to equitably move students from the old program into the new was worked out by the coordinators and the secondary and elementary education departments. It was agreed to offer a section of each of the "old" courses during the 1972-73 year so that night students could complete their original course of study without handicap.

A series of pre-registration orientation meetings was held on

April 10, 1972, to inform students as to the general nature of the proposed changes and to provide advising assistance in planning their program. These meetings were held hourly from 8:00 a.m. through 6:00 p.m. for elementary and secondary education majors separately. Over 90% of the undergraduates attended. Data was collected at that time regarding the projected number of students who would be enrolling for the new program in the fall and where in the new program they would begin. In this way, information was given consistently and questions could be answered immediately. The few questions occurring since that series of meetings indicate that this strategy was successful.

In addition to these large group meetings, a full article appeared in the University newspaper in May outlining the nature of the changes in the program. Further, a half hour television program, created and produced by the local Public Broadcasting System, the Dean of the College and the coordinators was aired June 7, 1972, in which the nature and rationale of the new program was outlined and described.

8. Establish Relationships with the Public Schools

Formal relationships with the public schools in the Toledo area began many years ago. The College and the schools have continually had a strong, cooperative partnership. Students in "methods" courses have for some time worked up to 60% of the time in classrooms in the Toledo Public Schools. University staff have been consistently visible in the schools providing, in addition to methods and student teaching supervision, much formal and informal inservice support. The Multi-Unit Schools for Teacher Education Committee (MUST) was created in 1968 jointly by the Toledo Public Schools and the College to work together for the development of multi-unit schools.

Therefore, working with schools in the development of the new program was only a natural extension of previous activities.

As the structure and specifics of the developing program began to take on a clearer form, dialogue with the public schools began to focus on the implications of the changing program in terms of new field experiences. Initially, the MUST committee was the focal point for this dialogue. An ad hoc committee met every other week during April and May, 1972, to work out ways in which the new program -- with new needs and new objectives -- might be translated in terms of field experiences. Further discussion focused on what new roles teachers would play in the new program.

However, in the spring of 1972 the Metropolitan League of Multi-Unit Schools was created as a cooperative venture funded and supported by the State of Ohio, the College of Education, and the Public schools in the Metropolitan Toledo area. Three College staff were assigned part of their faculty load to provide liason and leadership effort to the building of this new league. To seek ways in which this new group and the Undergraduate program might work most effectively, a third retreat was held the first week in June which was attended not only by the elementary and secondary teams, but by 15 teachers and administrators from Metropolitan League schools in the Toledo area. Plans were made at this time for developing new working relationships with the public schools. A key decision at this time was the creation of Teacher Education Centers linking four to six schools in different school districts and one instructional team. This group would be responsible for overseeing the field experiences within the program as they affected the students and schools in their particular center.

At this time, the organization of these centers has not been formalized, but the groundwork has been laid for the complete development of this concept which will be a key activity during the 1972-73 year.

VIII. MILESTONES

During the course of our planning year several key events occurred which not only signified progress but at the same time were the causes of such progress.

A. Completion of Rough Draft Modules

The first significant event was the completion of the rough draft of the instructional modules. The faculty had agreed that we would translate the curriculum into "modules" which would include behavioral objectives, possible teaching strategies (treatment) and criterion items (pre- and post-test items). This became a threatening concern since each faculty member was stating publicly what he believed was worth teaching. Faculties being what they are, there was obviously some disagreement as to what and how to teach. Most of the faculty, however, did produce modules, or approximations thereof by the end of fall quarter, 1971. This writing was done on time outside faculty load and it was not unusual to find groups of faculty gathered at someone's house for a weekend to write and discuss modules. The completion of the rough draft modules gave us the opportunity to now discuss the new program in more concrete terms as well as further educate ourselves as to who we really were in terms of conflicting objectives and as integration of divergent points of view. It was also at this time that several faculty members began plans to field test their modules in the spring quarter classes.

B. First Retreat

The second of these "milestones" relates to the critical

affective component in the change process involving the in-service retraining of our faculty. Our goals and objectives required that we as a faculty reorganize our formal and informal interpersonal communications process if we were to produce a program which would synthesize our combined expertise in an interdisciplinary teacher education program. Our past behavior operationalized the typical notion of the separate departments and education disciplines. Hence, planning and teaching across departments had been minimal. This history of compartmentalization resulted in the normal reticence that a faculty might have about not only conceptually considering ourselves as a unit but also behaving in such a manner. We had evidence that this lack of cross discipline communication resulted in such problems as similarities in course content, contradictory data being provided students concerning psychology of learning and appropriate teaching strategies, and competition between departments for more resources. This duplication of effort was not only a waste of monetary resources but also a loss of opportunity to grow intellectually as a faculty.

The purpose of our first retreat was to seek, as a faculty, agreement concerning the following questions:

1. Goals of a new teacher education program;
2. Organizational structure of faculty in order to achieve the goals;
3. Decision making process to be operationalized in the planning and operational stages of new program; and
4. Agreement on time dimensions of development (due dates for task completion)

In addition to the above we believed that the retreat should also serve the social function of maximizing faculty interaction with regard to interpersonal relations. While it was indeed the case that between the hours of 9 a.m. - 8 p.m. we worked on the above tasks we realized quite quickly that the most profound results of such task orientation was the process involved in the problem solving sessions. What developed from this initial retreat were not only decisions concerning the objectives for the year and the organizational structure, but the feeling that working together as a faculty unit rather than the previous disparate groupings was a more useful way of proceeding. Individual faculty members commented that their perceptions of specific people had been erroneous, or that if the interests and competencies of particular persons had been known there would have been more team teaching prior to the development of a new program.

This first retreat, then, created an open atmosphere and a common commitment heretofore not established. This is not say that there was absolute agreement on all or even many matters, but now faculty agreed that an interdisciplinary team teaching approach was not only conceptually valid but operationally feasible. It was here that faculty agreed to openly disagree and confront publicly. This was the base upon we believed we could launch an administrative pattern which would carry into any program developed. It was here that the faculty as a unit agreed to engage in interdisciplinary team teaching, individualized instruction, and provide a model of competency-based instruction for our students. To do less than that would be to admit hypocrisy.

C. Choosing Teammates

Following the first retreat the faculty interested in preparing elementary teachers divided into three teams of five to seven members each. This was accomplished by self-selection with each person having the opportunity to list those individuals he believed he could work with. The teams now formed began to decentralize the planning process in elementary as they began to set their own tasks and deadlines and found this easier to do in such small numbers. The coordinators provided inter-team continuity along with team representatives. Mini-retreats began to happen as teams began to plan for continuity and hierarchial structure. The secondary program continued to be planned by one large team of twenty faculty, always coordinated with the elementary planning.

D. Rescheduling of Courses

The University of Toledo requires that each college schedule its courses at least two quarters in advance. Our fall, 1972, course schedule had already been planned as if our current program would continue. It was a significant event, therefore, that we took that schedule and completely reworked it to fit the design created by the faculty at the first retreat. The creation of the new schedule of courses demonstrated that we would indeed implement on a full scale the changes we had been planning. The word IF was now replaced with "in the fall" and the reality of a survival deadline gave impetus to an already tired faculty.

E. Second Retreat

Our second retreat was devoted to the rewriting of modules and the identification of program needs as it had been currently developed. It was at this time that the whole issue of public school relations was dealt with in depth to result in the identification of particular schools each team would work with and which schools in the secondary program would become teaching centers. This retreat was attended by faculty members from Wayne State University.

F. Third Retreat

Retreat number three resulted in the secondary faculty agreeing to continue to operate as one team, differentiating its expertise across two eight-hour courses and the supervision of student teachers. Elementary teachers and principals attended this retreat and agreed to a close alliance with the new program design.

IX. COMPLETION CRITERIA

We believe there is evidence to support our contention that we have met the objectives specified in our original planning grant proposal. We are going to implement a new teacher education program in the fall of 1972 for our entire undergraduate population of approximately 3200. The success of this new program is a question for future determination.

Three criteria must be used in determining the degree of successful implementation of our planned program. First, a competency-based program in teacher preparation requires that one assess the outcomes of the system. This ultimately requires the evaluation of our pre and in-service clients in terms of their teaching behavior (do they demonstrate the skills required by program objectives?) and the assessment of their students' learning. (Have pupils in public schools achieved significantly better with teachers from our program than with teachers from alternative programs?)

Second, we have predicated our planning upon the assumption that a university faculty can indeed operate in teams across administrative divisions and that adequate rewards within the institution will be forthcoming to sustain the teaching effort required. Political and economic constraints have consistently been with us. It remains to be seen if this plan can be operationalized without the massive infusion of Federal or private agency funding. This is critical if transfer to other programs is to take place.

Finally, and perhaps most critical, is the criteria of revisability. Lest we trade one orthodoxy for another we have committed ourselves to

keeping the system open to change. Our assessment design stresses both formative as well as summative evaluation of the program. If we find that within two years time people are unwilling to revise the program in face of adequate data suggesting that revision, then we have failed.

X. PROBLEMS AND FUTURE NEEDS

In planning the process which guided the shift from a "traditional" to a performance-based, interdisciplinary teacher education program, the faculty and coordinators anticipated and met problems as they occurred. In retrospect, aspects of the change process were successfully dealt with, while other elements, however, are still to be resolved.

A. Recycling Students

Because the progress a student makes in the program is a function of nis demonstrated performance, we know that many students will need to receive alternative treatments and have repeated experiences. The success of accomplishing this task will be dependent, in part, on the effectiveness of our orientation of students who are accustomed to completing a "course" at the end of a given quarter. Further, the instructional team will need to examine and, perhaps, reevaluate the performance criteria as it is now specified.

B. Data Concerning Pupil Learning

The performance criteria of students in the program is based largely on the learning outcomes of their public school pupils. We need to develop an effective and positive system by which this data can be gathered and evaluated. Certainly the public school teachers will need to work closely with the College faculty in accomplishing this.

C. Maximizing Individualized Instruction

A data management system for maximizing feedback to each of our

students is required to make an effective individualized program. The assessment component has been planned (See Appendix L) which will provide a means of accomplishing this. In addition, it will provide data to the instructional team concerning the effectiveness of the total program. What remains, however, is for adequate funds to be made available for this plan to be put into effect.

D. Community Input

We recognize that the involvement of individuals and agencies representing the total community has been minimal. We need to bring together the College and the public schools into a larger coalition for the improvement of schools and community growth.

E. Evaluation

The traditional grading system appears to be antithetical to a performance-based program. While we begin in the fall using the traditional grading procedures, we recognize the need to communicate the competencies of pre-service teachers to future employers that will adequately articulate what the student has demonstrated he can do. Letter grades do not adequately translate.

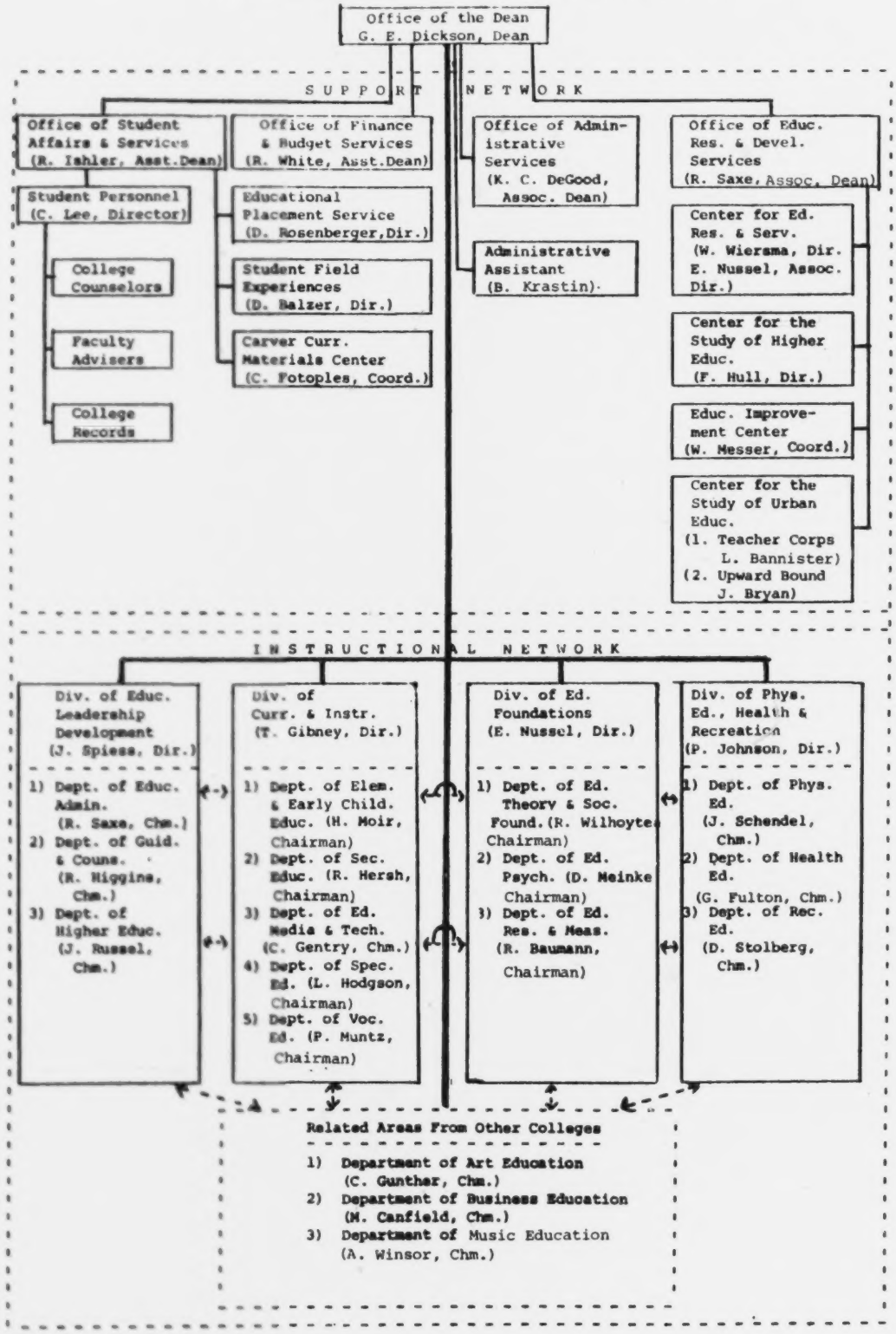
F. Teacher Education Centers

The impetus to develop the teacher education center concept exists, though more dialogue and planning is needed to bring this concept to fruition. Through the efforts of the instructional team and the multiunit schools that will be working together, and with the coordination provided by the College, the centers should become operational by the end of the academic year 1972-73.

APPENDIX A

COLLEGE ADMINISTRATIVE ORGANIZATION

COLLEGE OF EDUCATION ORGANIZATION AND ADMINISTRATION


Office of the Dean
G. E. Dickson, Dean
SUPPORT NETWORK
Office of Student Affairs & Services (R. Ishler, Asst.Dean)
Office of Finance & Budget Services (R. White, Asst.Dean)
Office of Administrative Services (K. C. DeGood, Assoc. Dean)
Office of Educ. Res. & Devel. Services (R. Saxe, Assoc. Dean)
Student Personnel (C. Lee, Director)
College Counselors
Faculty Advisers
College Records
Educational Placement Service (D. Rosenberger, Dir.)
Student Field Experiences (D. Balzer, Dir.)
Carver Curr. Materials Center (C. Fotoples, Coord.)
Administrative Assistant (B. Krastin)
Center for Ed. Res. & Serv. (W. Wiersma, Dir. E. Nussel, Assoc. Dir.)
Center for the Study of Higher Educ. (F. Hull, Dir.)
Educ. Improvement Center (W. Messer, Coord.)
Center for the Study of Urban Educ.
(1. Teacher Corps L. Bannister)
(2. Upward Bound J. Bryan)
INSTRUCTIONAL NETWORK
Div. of Educ. Leadership Development (J. Spiess, Dir.)
1) Dept. of Educ. Admin. (R. Saxe, Chm.)
2) Dept. of Guid. & Couns. (R. Higgins, Chm.)
3) Dept. of Higher Educ. (J. Russel, Chm.)
Div. of Curr. & Instr. (T. Gibney, Dir.)
1) Dept. of Elem. & Early Child. Educ. (H. Moir, Chairman)
2) Dept. of Sec. Educ. (R. Hersh, Chairman)
3) Dept. of Ed. Media & Tech. (C. Gentry, Chm.)
4) Dept. of Spec. Ed. (L. Hodgson, Chairman)
5) Dept. of Voc. Ed. (P. Muntz, Chairman)
Div. of Ed. Foundations (E. Nussel, Dir.)
1) Dept. of Ed. Theory & Soc. Found. (R. Wilhoyte Chairman)
2) Dept. of Ed. Psych. (D. Meinke Chairman)
3) Dept. of Ed. Res. & Meas. (R. Baumann, Chairman)
Div. of Phys. Ed., Health & Recreation (P. Johnson, Dir.)
1) Dept. of Phys. Ed. (J. Schendel, Chm.)
2) Dept. of Health Ed. (G. Fulton, Chm.)
3) Dept. of Rec. Ed. (D. Stolberg, Chm.)
Related Areas From Other Colleges
1) Department of Art Education (C. Gunther, Chm.)
2) Department of Business Education (M. Canfield, Chm.)
3) Department of Music Education (A. Winsor, Chm.)

5-7-71

APPENDIX B

"STATE OF THE MODEL:"

MEMO FROM GENERAL COORDINATOR

THE UNIVERSITY OF TOLEDO / TOLEDO, OHIO 43606 / [419] 531-5711

College of Education

October 8, 1971

TO: SYSTEMS COORDINATORS, DICK HERSH AND HUGHES MOIR

FROM: Cass Gentry

RE: State of the Model - Fall 1971

The following are some thoughts that I put down on paper to reorient me to our task this fall. It occurred to me that you might be interested in reading and perhaps reacting.

The system begins as an apparent conglomeration of the old and the new. That is, there is a framework of a new model that presumably shapes the system (Analysis, prescription, implementation, evaluation, revision, recycle), but within that framework, pre-model behaviors continue to operate. Many of these behaviors are antithetical to the model, and to the apparent purposes for which the model was designed. Some of them, of course, are serving personal needs of faculty and administrators involved. Other antithetical instructional behaviors result from habit, or because they serve short-term goals very well, but their accumulative effects may cause serious failure in another part of the system. The human mind is excellent for discerning the structure of complex systems and the principles on which they operate, but very poor for deriving the implications of the assumptions it makes. Both of these acts are largely intuitive, however, intuition operates very well for the first act, but poorly for the second. Forrester[1] identifys four traps into which intuition often falls:

* The attempt to relieve one set of symptoms is likely to produce more unpleasant symptoms.

* The attempt to produce short-term improvement often causes long-term degredation.

* The local goals of parts of a system often conflict with the goals of the larger system.

* Intuition often leads people to intervene at points in a system where little leverage exists and where expenditure will have little effect.

[1] J. W. Forrester. World Dynamics. Wright-Allen Press, Cambridge, Mass., 1971.

At any rate, antithetical behaviors must be endured during the initial phasing-in of the new model because of our level of resources. However, this makes the installation and maintenance of the evaluation and revision components of the system critical to the eventual effectiveness and efficiency of the model. The evaluation and revision components make the effects of the system visable, and justifies modification.

Initially, we need to be sure that the modules contain a match among objectives, means, and criteria. This match has verbal and written confirmation, but as yet results only approximate what would be necessary for evaluation and revision. During this year a major task will be to encourage closer approximations of that match. I said initially, because I recognize, as you do, that there is much more to the evaluation of this very complex instructional system that our faculty is developing, than the proposed match, but that match does appear possible and it will ensure revisability, and we can afford it at this time. We obviously do not have the resources available that a full-scale evaluation would require. However it is not to soon to begin designing a full-scale evaluation system. We should consider, very soon, the formation of a group who can provide the necessary expertise to design such a system (Meinke, Baumann, etc , , ,).

The above statements highlight, I hope, the need to differentiate between appropriate and antithetical behaviors, and between short-term and long-term effects of decisions. Such knowledge seems essential to the whole view that we, as system coordinators, require in order to do our job.

Probably the most important single factor effecting the success of our part in developing and implementing the Elementary and Secondary Teaching Model will be our means of communicating. A functioning communications network is absolutely essential not only between the three of us, of course, but with the faculty, Department heads (they control the resources), and the upper levels of administration both in our college and in the University. Necessary, also, will be means of communicating necessary information to and from our students, and certain outside agencies (Public schools, etc).

A task that we should address ourselves to initially is setting up such a network. This will be very difficult, because probably the only functional network will require specifying time and people meeting on a regular basis. A more logical plan would be to meet as the need arises, but this seldom works because of the devices each of us set up to protect his time, and secondly because of divided and conflicting priorities. To illustrate, I am presently serving two roles; Department Chairman, and Systems Coordinator, as are you. Both of these constitute full-time tasks, so we are forced to make decisions and to establish priorities. This in itself is not necessarily bad, but our tendances under the pressures of task-overload is to make decisions for short-term gains, and to deal with immediate crises. The result in the case of the Communication network, is that we reduce it to the role of handling crises, and lose the element of planning ahead and taking time to get reactions concerning future events that let us prepare for future contingencies.

At least for these and other reasons I suggest that we establish fine groups in our communications network:

a. Department heads: these individuals have the most power over resources and certainly in terms of their responsibilities have the right-to-know about factors effecting their departments.

b. Division heads: the role that these individuals will play in the model development is not yet clear. I suspect they would welcome an interpretation from us. They will certainly be important in dealing with the administrative mechnaics of getting the model accepted, and of supporting the many necessary exceptions to college and university rules and policies that must occur in our development and implementation year of 1972-3.

c. Outside decision-makers: we have already faced the fact that much of what we do in our model depends on the reception by public school. These decision-makers are in a position to facilitate our model. But they, in order to make facilitative decisions, need to be kept up to date on how the model effects them.

d. Dean Dickson: It is clear that only through the Dean's continued support will the model become a reality. There are certain kinds of facts and decisions that he must be made aware of in order to provide us with the necessary support to get our jobs done.

e. Systems Coordinators: Our trialogue must be continuous. We need to be careful not to make unilateral decisions or commitments that may conflict with other coordinators.

The question becomes one of how can we, as coordinators assure that these communication needs are met. I doubt if we can do it without formalizing these elements. If we do set up formal structures, then I suggest we need to carefully prepare for each of these meetings so they don't devolve into "more conversation". In a word they need to be <u>task oriented</u>.

Finally, I suggest that while between the three of us, we possess much of the data for coordinating the development and implementation of the system, I am also sure that we lack much of the essential data. To this end I recommend that we very soon go through the tedious task of PERTING out the events of the coming year so that we can determine presently unknown data and set up priorities for obtaining and handling that data.

I am sure the above only scratches the surface of our problems as Coordinators, but perhaps it can provide a beginning for the many discussions to come.

E & S Model 10/7/71

Allocation of Resources

1. Determine how resources ($, personnel, space, materials, equipment, etc) are presently being allocated by Department

2. Estimate resourse necks for E & S Model operation

3. Determine present resource allocation to program elements that will soon be phased out (Courses, personnel, materials etc.)

4. reallocate those resources to appropriate elements of the E & S Model

5. Determine additional resources needed (if any)

6. Work compromise (best alternative) allocation to cover all E & S Model resource requirements

7. Formalize acceptance of re-allocation

E & S Model 10/7/71

Tasks sequence for developing Module - faculty

1. Select Module subject from Department Chairmans list

2. Select or develop objectives for their module

3. Select or develop criterion items for each objective

4. Survey methods and Materials for meeting objectives

5. Select or develop methods materials for meeting objectives

6. Match objectives and criterion items with methods and materials

7. Put module into common format

8. Give copy of New Module to Department Chairman

E & S Model 10/7/71

Task sequence for developing Modal Department Chairman

1. Give faculty a list of modules to be developed by department (Context)

2. determine with faculty who will be responsible for developing which modules

3. Provide information on module format and definitions (coordinators)

4. Establish deadlines for completion of specific modules

5. provide released time for faculty developing modules (1 day workshops at motel, etc.)

6. recieve and review New modules in terms of format requirements

7. provide a copy of the New Module to coordinators

E & S Model 10/7/71

Complete Scheduling strategy for E & S Model 1972-3 by december 15

1. Based on data from faculty load and assignment estimate (Event 8), contrast 1972-3 schedule with 1971-2 catalogue

   a. match module clusters with present courses

      1) determine modules that don't fit into present course structures

      2) determine sequence conflicts where 1972-3 modules are in different sequence than present courses (prerequisites)

      3) determine minimal changes necessary for course meeting times to permit E & S Model to follow appropriate sequence

      4) determine minimal changes in faculty assignments, by present course structure, for incorporation of E & S Sequence

      5) determine minimal space classroom changes to incorporate E & S Model

      6) Complete list of all changes by December 15

      7) determine independent scheduling action necessary. Get catalog and student schedule deadlines straight.

E & S Model 10/7/71

Determine the effect of professional year on Arts and Science (General Ed. Program)

1. Determine Ed. Students at different levels taking A & S courses 1971-72 terms

2. Determine Ed. students at different levels taking A & S courses 1972-73 terms

3. Resolve differences with appropriate A & S contacts

E & S Model 10/7/71

Determine Faculty load for Fall 1972- 1st Cycle

1. Get tentative list of all modules.

2. Make initiative sequence of all modules

3. Determine module clusters by natural breeds and load considerations

4. Estimate which modules will be responsibilities of which Department

5. Estimate which modules will be joint responsibilities of one or more Departments

6. Estimate shape of module clusters

7. Estimate number of faculty needed/ department to handle module clusters

8. Tentatively assign faculty module clusters- (load)

DICK MARSH

E & S Model 10/7/71

Undergraduate field Experience Elements of Model

1. List Field experiences (type and environment needed)

2. Determine sequence of field experiences

3. Determine College agencies responsible for each type of field experience

4. Determine outside decision-makers for field experience (names of individuals in Public schools, industries, etc.)

5. Contact outside decision-makers and get agreement-in-principle

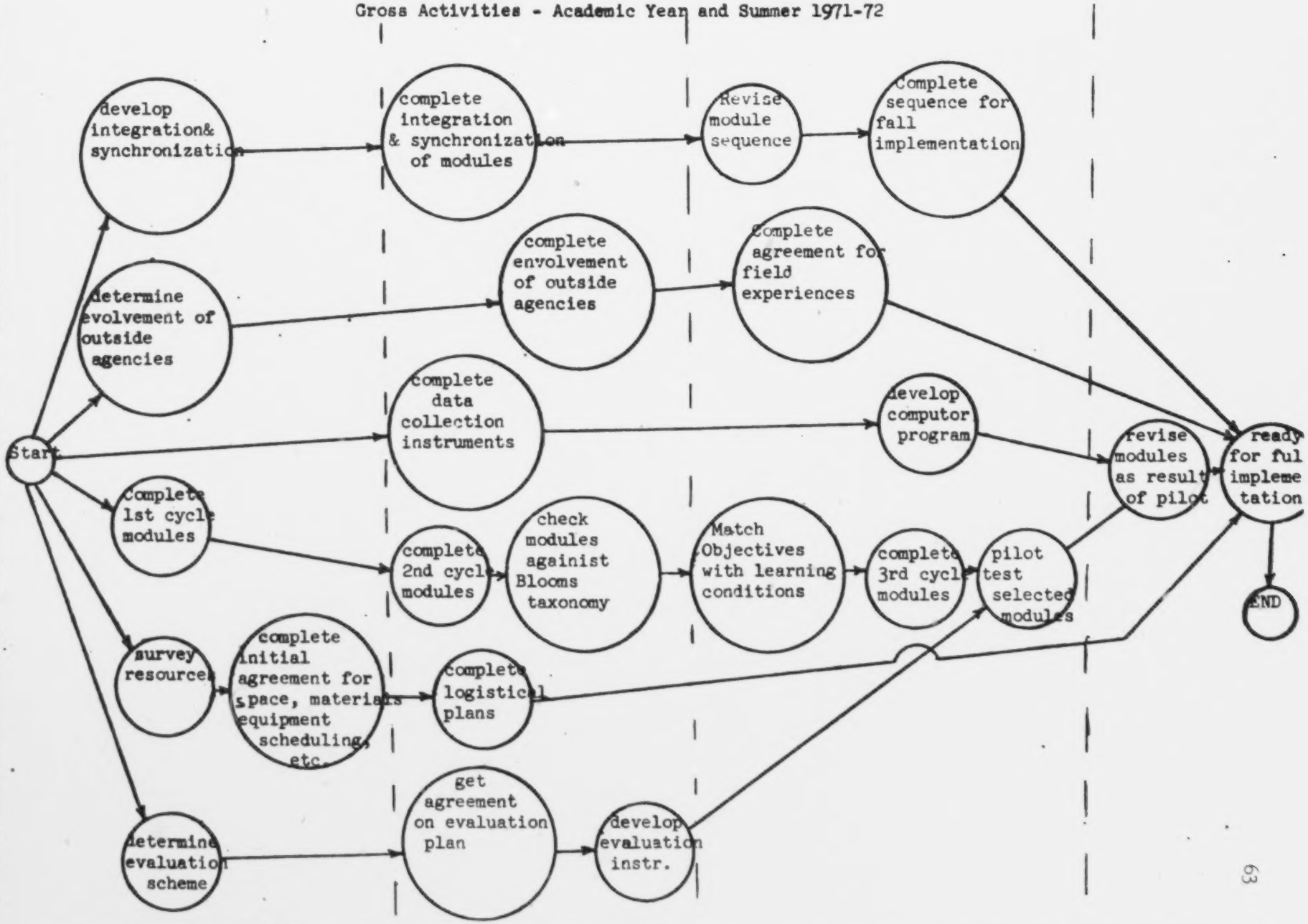
6. Write letter of agreement between outside decision-makers and college agencies responsible for field experiences.

APPENDIX C

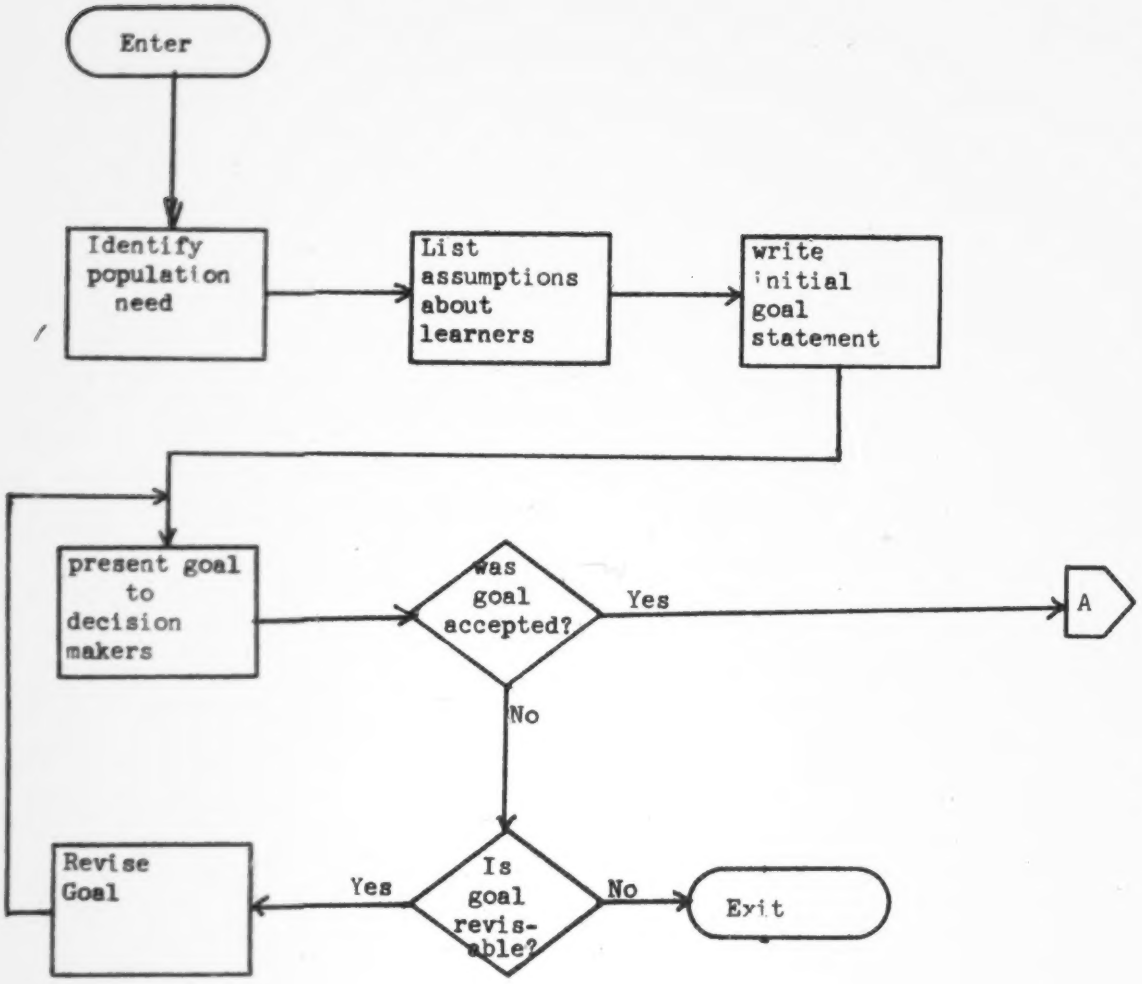
PROGRAM REVIEW AND EVALUATION TECHNIQUE (PERT) MATERIALS

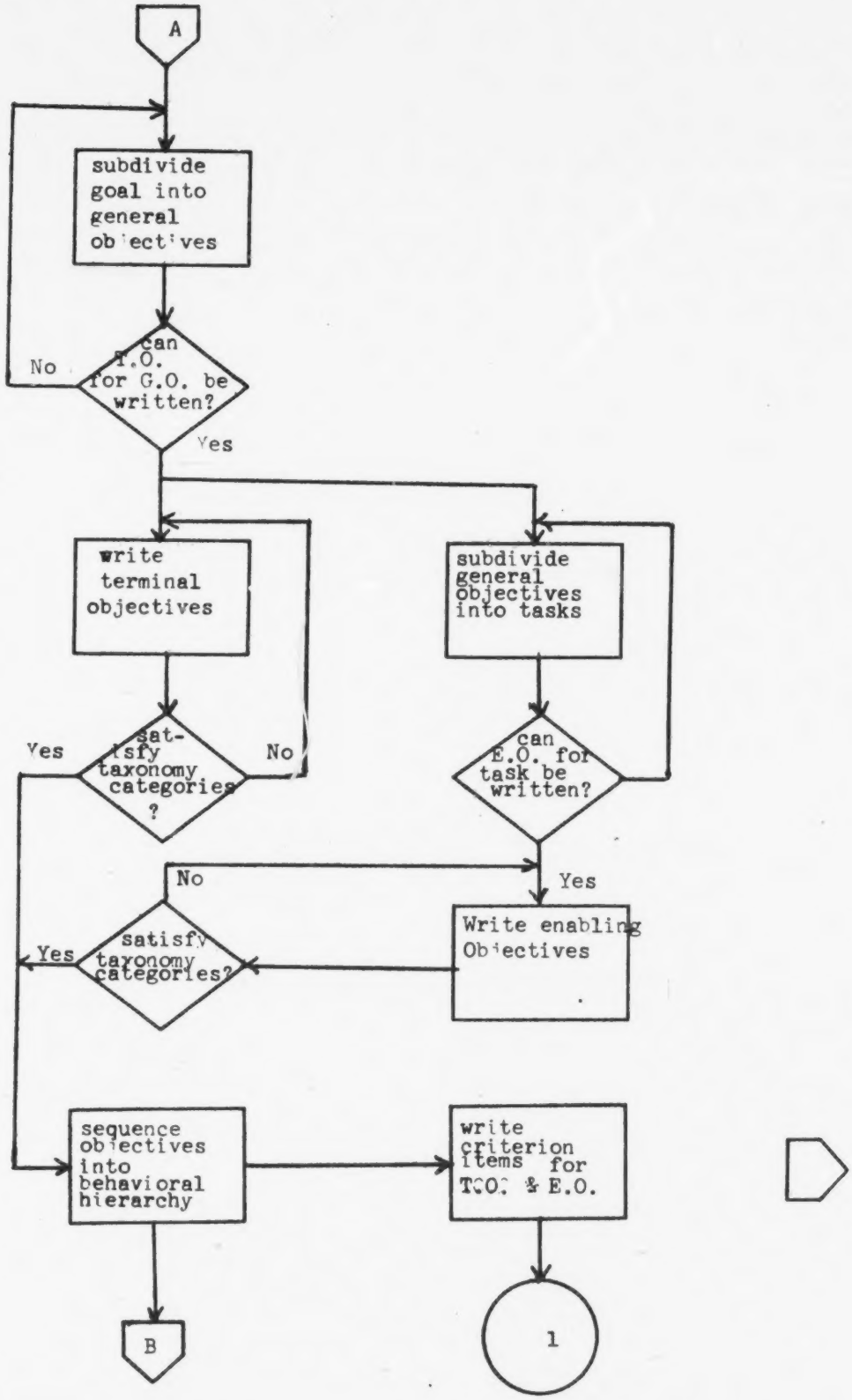
Elementary & Secondary Teaching Program Model

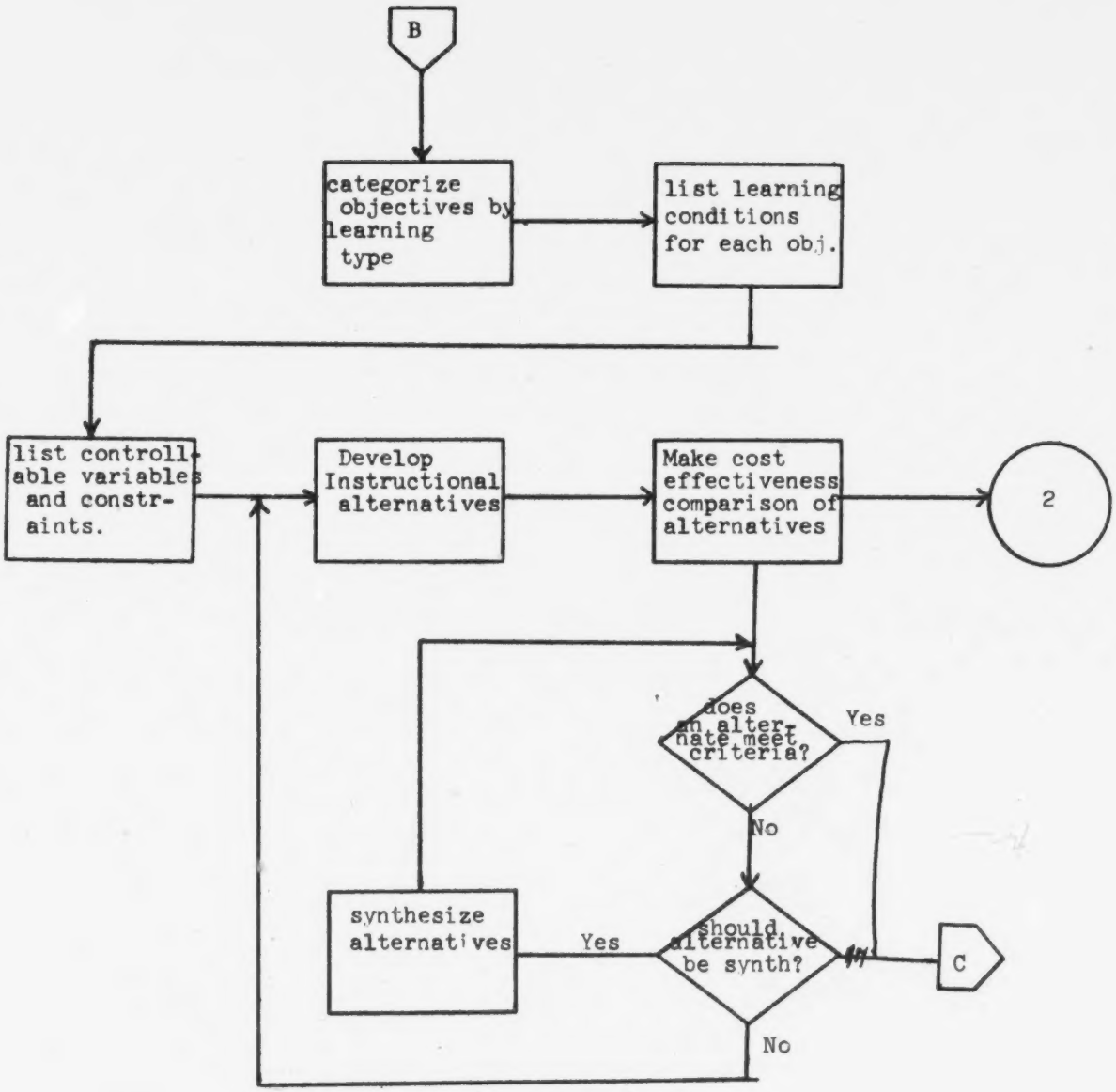
Gross Activities - Academic Yean and Summer 1971-72

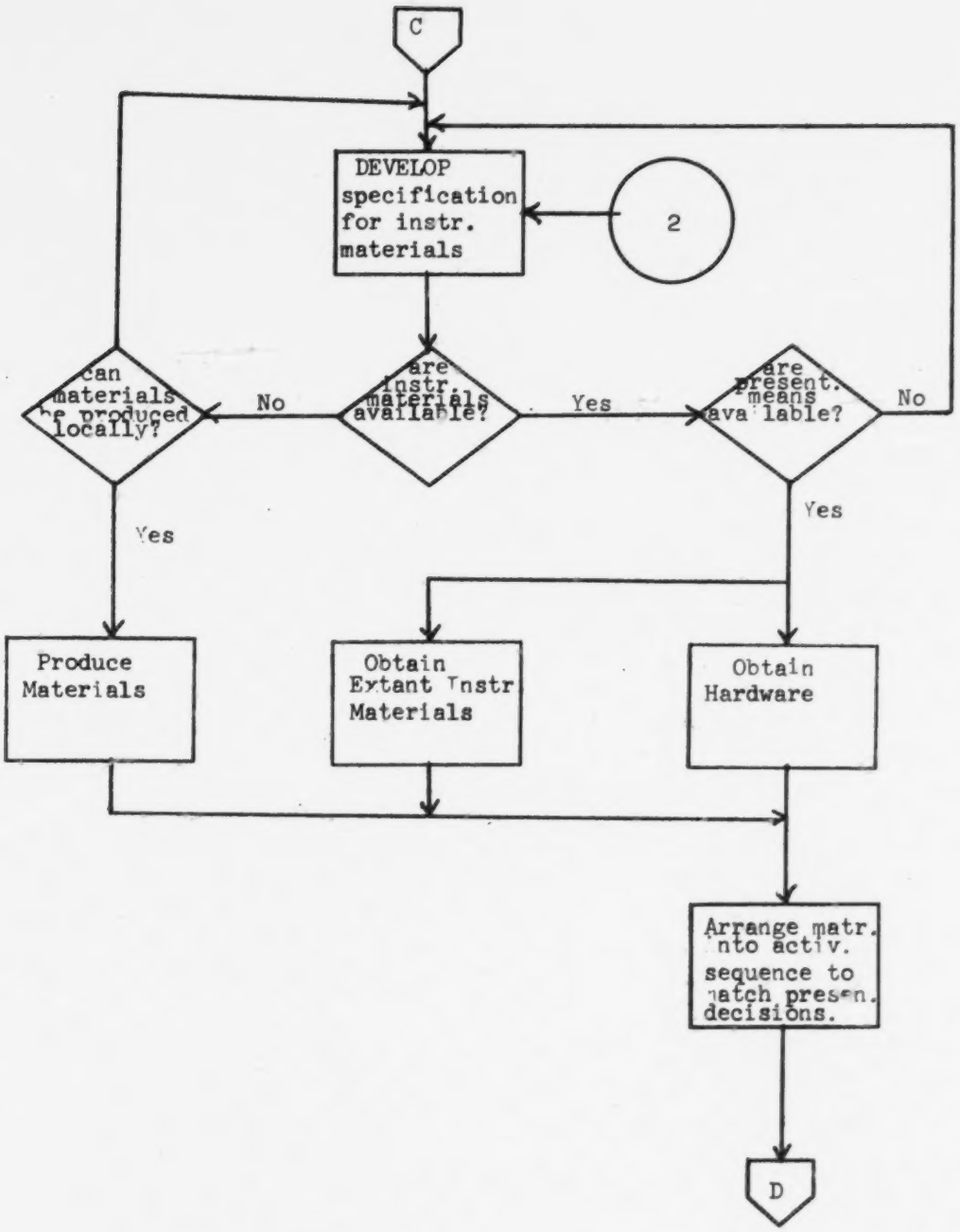

develop integration& synchronization
complete integration & synchronization of modules
Revise module sequence
Complete sequence for fall implementation
determine evolvement of outside agencies
complete envolvement of outside agencies
Complete agreement for field experiences
Start
complete data collection instruments
develop computor program
revise modules as result of pilot
ready for ful impleme tation
Complete 1st cycle modules
complete 2nd cycle modules
check modules againist Blooms taxonomy
Match Objectives with learning conditions
complete 3rd cycle modules
pilot test selected modules
END
survey resources
complete initial agreement for space, materials equipment scheduling, etc.
complete logistical plans
determine evaluation scheme
get agreement on evaluation plan
develop evaluation instr.

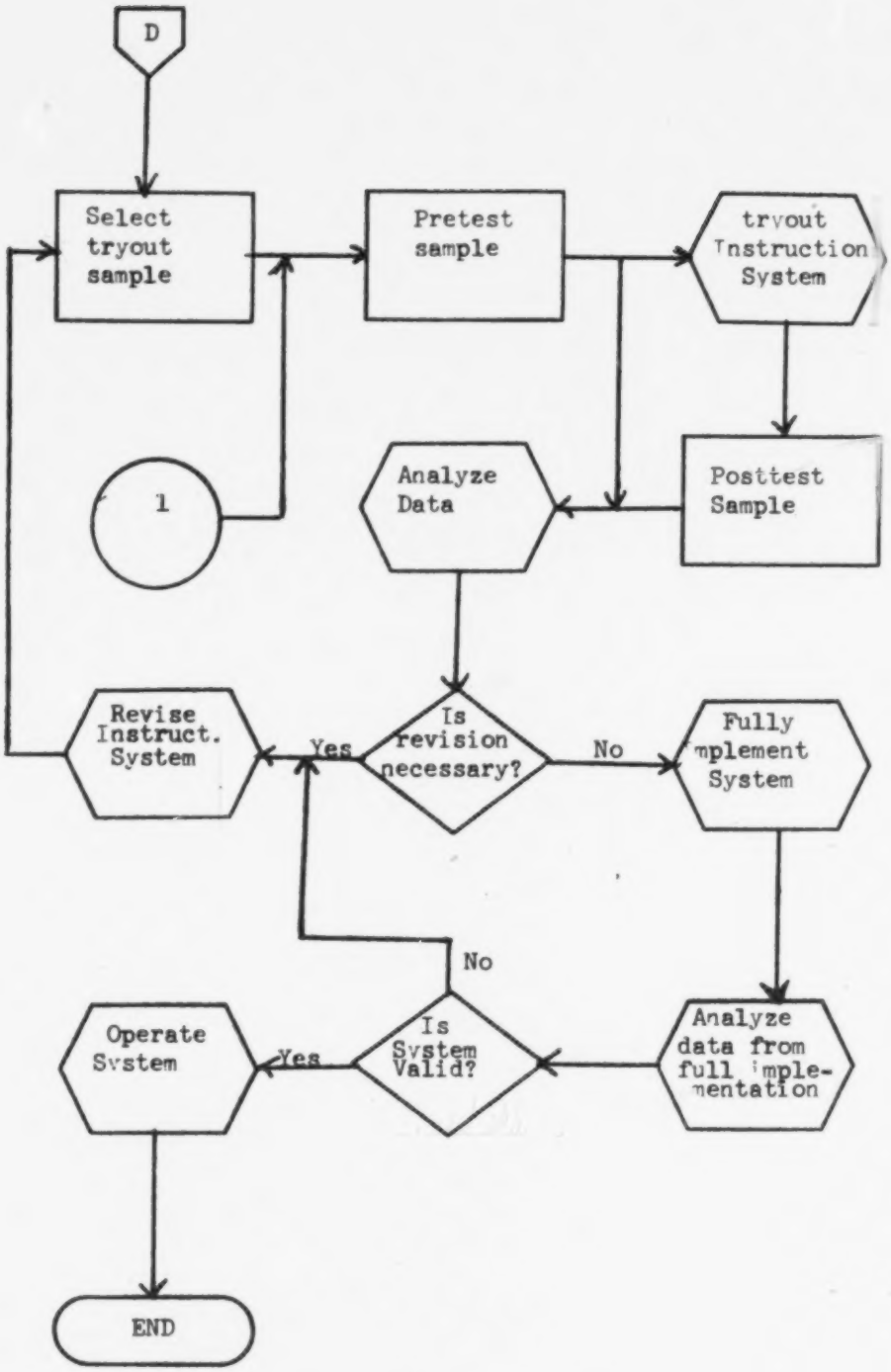
Fall 1971 | Winter 1971-72 | Spring 1972 | Summer 1972


Enter
Identify population need
List assumptions about learners
write initial goal statement
present goal to decision makers
was goal accepted?
Yes
A
No
Revise Goal
Is goal revis-able?
Yes
No
Exit


A
subdivide goal into general objectives
can T.O. for G.O. be written?
No
Yes
write terminal objectives
subdivide general objectives into tasks
satisfy taxonomy categories ?
Yes
No
can E.O. for task be written?
No
Yes
satisfy taxonomy categories?
Yes
Write enabling Objectives
sequence objectives into behavioral hierarchy
write criterion items for T.O. & E.O.
B
1


B
categorize objectives by learning type
list learning conditions for each obj.
list controllable variables and constraints.
Develop Instructional alternatives
Make cost effectiveness comparison of alternatives
2
does an alternate meet criteria?
Yes
No
synthesize alternatives
Yes
should alternative be synth?
C
No


C
DEVELOP specification for instr. materials
2
Can materials be produced locally?
No
are instr. materials available?
Yes
are present. means ava lable?
No
Yes
Yes
Produce Materials
Obtain Extant Instr Materials
Obtain Hardware
Arrange matr. nto activ. sequence to match presen. decisions.
D


D
Select tryout sample
Pretest sample
tryout Instruction System
1
Analyze Data
Posttest Sample
Revise Instruct. System
Yes
Is revision necessary?
No
Fully mplement System
No
Operate System
Yes
Is System Valid?
Analyze data from full mple-mentation
END

APPENDIX D

MODULE FORMAT

PREPARATION OF MODULES

Modules may be based on one or more specifications. Whether or not an individual specification should be grouped with other specifications should be based on the following characteristics of a module:

CRITERIA FOR A MODULE:
TIME:
Student time: No less than 5 hours; no more than twenty hours
Professor time: Maximum ten hours.

TREATMENT:

If the treatment is not self-instructional, a self-instructional option is available to the student. The option sequences specific readings or media that are recommended to the student.

The suggested treatment is a continuous learning experience--the total elapsed time from the beginning of the module to the end should not be more than two weeks.

CRITERION MEASURE:

The module--unlike the specifications--contains the actual instruments that will be used for pre-testing and post testing. It contains not just the methodology for developing a criterion but the actual criterion. EXCEPTION: Some educational goals do not lend themselves to objective measurement at this time. For those modules (EXPERIENCIAL MODULES) no criterion measure will be written. The evaluation will consist of determining whether or not the student participated in the experience. Thus unlike the Behavioristic Modules, the student cannot test out of an Experiencial Module.

FORMAT OF MODULES:

Context:
Topic:
Target Population:
Module Name (and specifications incorporated)
BEHAVIORAL OBJECTIVES (1)
PREREQUISITE MODULES (2)
PRE-TEST (3)
TREATMENT
Suggested & Est. Student Time,(4) Est. Prof. Time
Alternative(5) & Est. Student Time
POST TEST (6)
MATERIALS
CRITERION (7)

NOTES:

(1) A module contains one or more behavioral objective.
(2) Few people know all the specifications in the Ohio Model. Describe the sort of competency (cies) students would need to have to participate effectively in the treatment.
(3) Describe the type of pre-test evaluation. If it is an Experiencial Module omit this category.
(4) Please estimate the amount of time a professor will be involved in interacting and evaluating student performance. Assume student enrollment is the same as in the course in which you will be field testing the module.
(5) Please state and sequence the readings, media or experiences that a student could do to achieve the objective independent of interacting with the professor and other students.
(6) Post test. See no.3.
(7) Criterion. The last part of the module contains the actual evaluation instrument that will be used to determine if the student achieves the module.

SAMPLE ATTACHED:

Learning Module*

The instructional unit by which criterion-referenced teacher preparation programs are personalized is the **learning module.** Characteristics of a module are listed below:

1. Objectives are identifiable and known both to the instructor and the learner.

2. A procedure is outlined for demonstrating competence prior to engaging in module learning activities.

3. To accommodate individual learning styles, more than one mode of instruction is included.

4. Students have the option of recommending an alternate mode of instruction to those proposed.

5. A module focuses on learner needs--not instructor needs, operational procedures or organizational patterns.

6. A module is discrete, with a beginning and terminal point.

7. Discrepancy evaluation between objectives and outcomes of the module leads to feedback and module revision.

8. Learner and instructor jointly select module options.

Given the above characteristics, modular format could be as follows:

Rationale--a clear statement of why the module is important.
Objectives--stated in criterion-referenced terminology.
Pre-assessment--including statements of prerequisites and pretests related to the module.
Enabling Activities--identification of alternative learning tasks, required materials, their location, etc. One option would be student-identified, in order to provide an open system and one amenable to personalization.
Post-assessment--usually a self-administered device to aid the learner to assess his own competence in this module.
Identifiers--module names, numbers, authors, dates of development, file terms, etc., which are useful in describing modules.

* from Houston & Hallis. "Personalized Math Teacher Preparation." Educational Technology, March, 1972. pp.48-49.

APPENDIX E

SEARS SITE VISITOR REPORT #1

New York University

School of Education
Student Teaching Office

4 Washington Square Village, Suite 1M
New York, N.Y. 10012
Telephone: (212) 598-2865

November 22, 1971

Memo: Mrs. Jane Otten, AASCU, Profs. Richard Hersh, Cass Gentry and Hughes Moir of the University of Toledo, Sears Guideline Panel

From: Howard Coron

Re: Site Visit, November 15-16, University of Toledo

Schedule of Visit

Monday	Elementary Education Department Retreat at Motel - (Writing modules) Meetings during this time with: 1. Dean Richard Ishler 2. Prof. Jack Ahern - Teacher Corps 3. Coordinators of Project (3) Prof. Richard Hersh Prof. Cass Gentry (Prof. Hughes Moir was working with his staff) 4. Various Elementary Education faculty	9:30-11:30
	Lunch with Elementary Education staff	11:30-12:30
	Meeting with Coordinators	12:30-1:30
	University of Toledo meetings Prof. Bill Beck, Career Decisions Program	1:30-2:30
	Introductions to various staff people	2:30-3:30
	Meeting with Coordinators - Motel	3:30-5:00
	Dinner with Coordinators and Elementary Education staff	
Tuesday	University of Toledo Meeting with Hersh	9:30-11:00
	Career Decisions Seminar Staff meeting	11:00-12:00
	Lunch with Hersh and Gentry	

Visit - Multi-Unit School in Inner City with Dr. Moir (Martin Luther King School)	1:15-3:00
Meeting with Dr. Moir at University	3:15-4:15
Meeting with Dr. Gentry	4:15-5:00

The Coordinators planned these meetings on the basis of questions and notes I had sent them prior to my visit. As I visited with a number of individuals and groups, the original schedule was changed, and is reflected in the above schedule.

General Information, Observation and Reactions

It is important to note that the budget had been discussed and then changed prior to my visit, to more accurately reflect what the University of Toledo group wished to do. The money to be used by a Director of the project was now being used to pay for retreats so that the faculty could develop the modules needed for their teacher training program. The Deans had freed the Coordinators of some of their load so that they could direct the project. It was apparent that these three gentlemen were giving much more than the designated faculty load for the project and this will be described in this report.

It was apparent that the Coordinators of the project had a scheme (PERTed) for the achievement of the two general objectives stated in their proposal (see Report by Dr. Hersh):

1. To establish a competency-based program of teacher education.
2. To unite the University, the local education agency, and the target school community in both the education of children and prospective teachers.

(The first objective grew out of the rather thoughtful work University and school personnel had done several years earlier for the Office of Education - Educational Specifications for a Comprehensive Elementary Teacher Education Program.) When the funds were no longer available from the Office of Education the University group decided to redeploy its staff and implement their original design. Examples of the implementation of the original design were the multi-unit schools in the inner city (all eleven Title I schools in Toledo are involved in some way with the University of Toledo staff, some more intensively than others) and the Career Decisions Program. I am aware of other examples of this implementation but these were the two that I felt were appropriate to the Sears project.

Competency-Based Program Objective

The University of Toledo staff, rather than shelving the Office of Education project, reviewed its original objectives and the designed program, revised it and chose aspects of it to work on during the years prior to the Sears grant. At this time the Planning Committee decided

that its teacher training program was ready to be designed as a series of teacher training modules which would encompass the program of the two major divisions within the School of Education: Curriculum and Instruction and Educational Foundations. (The Curriculum and Instruction Division includes the Elementary, Secondary, Media and Early Childhood Departments and the Educational Foundations includes the Educational Psychology, Social Foundations, and Measurement and Research Foundations. The Coordinators of the Sears Project are from three out of the four Curriculum and Instruction Departments. It was not clear to me how this group works with the Educational Foundations group, but I was told that the modules produced would be reviewed by the Educational Foundations group so that their work would lead into the competency-based program. It was also stated that the Foundations group had retreated and it too was developing modules for the total program. I expect that at my next visit there will be documentation of this interaction.)

The following, done at my request, is exerpted from a report by Dr. Hersh, secondary coordinator of the project, describing the time-line for the work to be done.

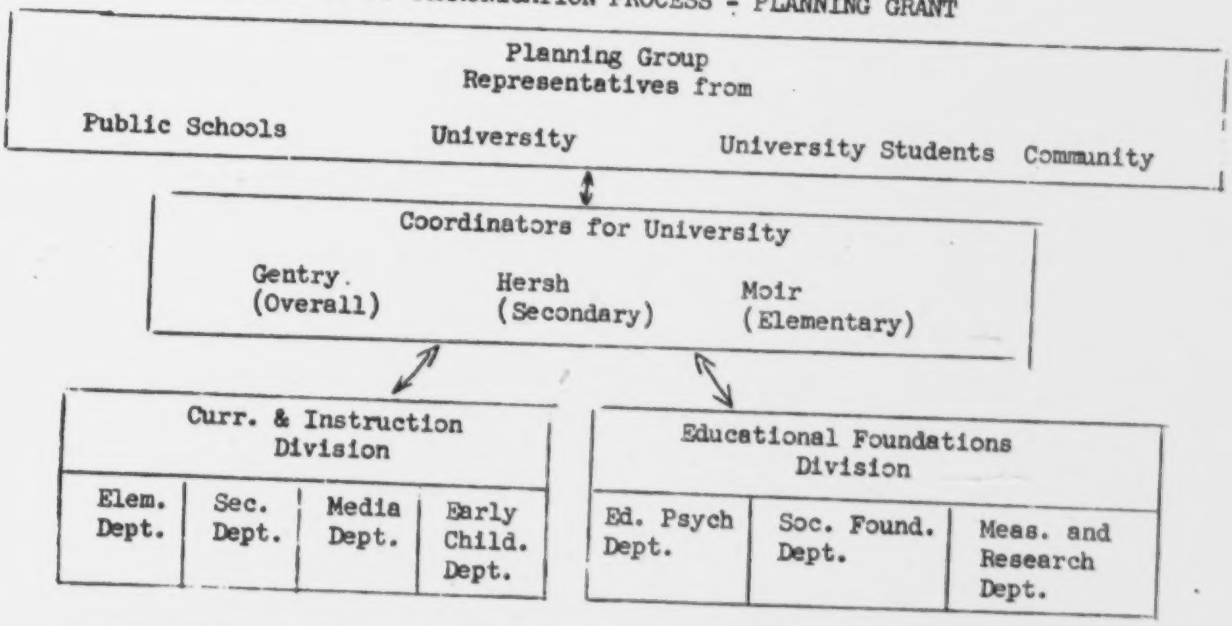
> The primary task during the fall quarter is to gear up our faculty for future planning and beginning implementation (of the developed competency-based modules) for Fall of 1972. To this end we have developed the following strategy:
>
> 1. Get each involved department to write modules (fall quarter)
> 2. Synthesize and add to modules plus formulate teacher education model and staff organization (winter quarter)
> 3. Involve community, students, public school personnel in reacting to, deleting, adding modules University staff has developed (winter and spring quarters)
>
> During the fall quarter to date we have been involved in getting faculty to write modules. We recognized that the major problem is time and have used Sears Grant money to release each department for two days each to go on a retreat and write as a department. This has been done for each of the departments in the accompanying diagram. The results have not only been worthwhile in terms of written material but staff morale and commitment has increased. The three Coordinators (Hersh, Gentry and Moirs) have met with each department during their department meetings and have taught faculty how to write modules. The Coordinators have also met bi-weekly with department chairmen and division chairmen to insure consistent communication and get vital feedback for further planning. To date we are quite pleased with the quality and quantity of the modules produced and feel that our spending has been fruitful; faculty have been pleased that we have released them for such work.
>
> The Coordinators envision that each department will sequence their own modules and then pass these sequenced modules out to each of the other departments in each division. We will then have a retreat with the two divisions present at which the task will be to synthesize the available modules across divisions. We are hopeful that we can develop a curriculum that reflects synthesis rather than separate specialty areas. Once the modules are so synthesized we will ask the planning

board as specified in the grant to react and join us in filling in the holes, deleting, etc. as well as to recommend those public school personnel who would also be helpful in this task.

In addition to the above tasks we have already contacted all the elementary and secondary public school people in the metropolitan area and have invited them to engage in this change process with us, especially as they relate to the field component of a future program. (See attached letter.) We have received enthusiastic response from seven systems with whom we have had poor relations of late.

The Coordinators, at my request, will keep a progress record of the changes that occur within the School of Education faculty as their planning program develops.

DIAGRAM OF COMMUNICATION PROCESS - PLANNING GRANT



Accountability to Parents through University-School Planning and Development

1. Multi-Unit School - I spent two hours in this inner city, all black, Title I school. As I talked with the staff, while walking into every classroom, it became apparent that University of Toledo faculty members were deeply involved in the school. A University coordinator spent at least 1/2 time in the school working in a variety of capacities from supervisor of Career Decision students (freshmen) to Student Teachers (seniors), to workshop leader, meetings with parents and staff and, at times, teacher of children. The school program reflected an exciting "doing" philosophy. Children were involved, in a most exciting way, with materials, self-selected activities, group projects and in general individually guided education. Staff was team planning, team teaching (except for one teacher who decided that she had to work alone, but this was obviously within the scope of accepting individualized differences even among teachers), and decision making even

on an administrative level. Dr. Moir, although not the Coordinator in the school (Jack Ahern is coordinator), was obviously well-known and well-liked. Teachers had taken courses with him and felt free during the visit to ask him to recommend new materials that they might explore. Parents are involved in a number of ways in the school from various committees to sessions with administrators and teachers concerning the plan and implementation of this multi-unit school concept developed at the University of Wisconsin. (For additional information on the Multi-Unit school, see 1971, Educational Comment, "The Ohio Model and the Multi-Unit School," Mussel, Ahern, Hinkle and Dickson, College of Education, University of Toledo.)

2. The Planning Group (see diagram) is composed of community representatives among others to review and make suggestions for change in the teacher training program developed by the University of Toledo faculty.

Problem: How will this newly developed program get proper exposure so that parents in the community will understand how this new program will effect their children? How is this program different from the old program and what will be the benefits for children?

Module Writing and Staff In-Service

It was apparent during the Site Visit that the elementary faculty was writing modules. I observed the total elementary education staff struggling with defining objectives, setting priorities, defining tasks to be completed by students, assessing behavior which indicates that the teachers in training had achieved minimal competency, assessing entrance behaviors, field practices as well as practice in simulated situations. These modules will become available to the Sears group as soon as they are reviewed by all other divisions. The faculty I observed were hot and heavy into defining what it was that they wanted to accomplish. Philosophical disagreements were quite noticeable, but by the end of the second afternoon the group had worked through a number of modules in a number of curriculum areas. I was particularly interested in the mediating role played by Dr. Moir as he helped the participants work through their disagreements and learn to write behavioral objectives as well as the modules. It was apparent that this coordinator had and was fulfilling his function as consultant and co-worker in the group. The other coordinators were also available to the group, even though they had been involved with their own departments. This was an indication of the communication channels developed by the group.

Since the "General Considerations for Site Visitors" had not reached me prior to my first visit I had prepared a series of questions that I needed answers to, concerning the proposal and its implementation. Since I was free to wander and also had opportunity to question the Coordinators as well as school personnel, faculty and administration at the University, I feel it is appropriate to give you information gleaned from the answers to my questions.

Information and Procedures for Involving Staff in the Project

1. Enough of the staff wanted to follow through with the original OE proposal.
2. The coordinators wrote the Sears proposal and had the support of the Administration.
3. Faculty load was lessened for the coordinators (institutional commitment).
4. Faculty was given time-off from teaching responsibilities to write modules (institutional commitment).
5. Coordinators spent a great deal of their time talking with various groups - cajoling, responding, making sense out of what faculty had done in the past and utilizing this commitment toward the new project.
6. The University of Toledo has shown great leadership in the Ohio Consortium (OE project) and therefore there was need to reassert this leadership function with the other institutions in terms of developing a competency-based program. The psychology of reinforcing this positive state-wide leadership role was used.
7. The coordinators work hard, organize, are great listeners and interacters and thus become models for faculty behavior. These coordinators meet weekly for a three-hour organization meeting.
8. Administrators participate in the development of these modules thus showing their commitment. (This includes Deans.)

These points I gleaned from various discussions I had with the participants but I suspect the coordinators would be better able to document faculty involvement in the project.

Faculty-Inservice Training

1. Teaching faculty to write objectives and modules.
   This has, in a sense, required faculty to commit themselves to paper that which they have been doing and conceptualizing for some time. This is an extremely fantastic development; fantastic in the sense that all other faculty members now have the opportunity to review that which is done, make suggestions, delete, tear apart, etc. This in-service program is by far one of the most exciting developments in the project. Even though I had only a little evidence of the pain that this incurred for some people it would be most appropriate to state that many individuals must be suffering some discomfort in the process. If one believes that change is painful, then certainly pain must be evident here, for change was obvious.

2. The coordinators have obviously made themselves experts in the area of developing competency-based programs. Often I heard them say something to the effect of, "We must do that which we are asking the staff to do." Not only were they producing modules, but they were reviewing others' work and making helpful, clarifying suggestions to their co-workers. I use the word "co-worker" here because I picked up some information concerning faculty's attitudes toward administrators (specific and general) and it appeared that this faculty, as most others, is somewhat hostile toward administrators. But, in only one case did I hear a faculty member be

critical of the project and its administrators, and when I fished a little with others, it became obvious that the problem existed within the individual and not as a result of what the coordinators were doing. In fact, the coordinators had worked through various strategies to help the individual achieve some success in working through this problems within the project.

Career Decisions Program

One of the innovative aspects of the University of Toledo program, working in conjunction with this planning grant and possibly utilizing the funds of the grant, is the Career Decisions Program. Freshmen are currently going through field-placements and University seminars in a program, modularly developed by the staff to help them "opt in" or "opt out" of a Teacher Education program. I had the opportunity to sit in on a staff meeting of this group; the group was composed of professors and graduate students from a number of disciplines. This cross-fertilization of faculty indicated a new development in Teacher Education programs. Field personnel were working with conceptualizers from Educational Psych, Educational Sociology, and Research and Measurement. The faculty has produced a handout related to this new program and this is available from Prof. Bill Beck at the University. What was particularly interesting was that the documents produced last summer are being revised as a result of field testing. In all groups that I observed there was a tentativeness about modules developed for the appropriateness of the work produced by faculty had to be field tested and evaluated by students, other faculty and public school personnel before it would become standard program. But even at that point there was an assumption made by the group that programs are revised to fit the needs of children in schools, students being trained and faculty who develop new skills.

Some Additional Comments

1. The project is developed on a self-help concept. Faculty need to control their own destinies as competent instructors. Coordinators have set their goal as facilitators as to what faculty wants to accomplish as well as being participants in the projects and fulfilling their own destinies.

2. Faculty, in a sense, are being forced to work together and in the process confront each other. Modules that are developed can be viewed by others. Students will be observed and evaluated on the basis of accomplishing tasks in these modules. Faculty is therefore accountable to other faculty if there is a scope and sequence to these modules over the whole teacher training process.

3. Faculty is moving away from being course teachers at the University to being integrators of content with the realities of the public school world. Faculty will have to learn to survive and then direct with public school personnel that which happens to children and students in the real world of schools.

4. Retreats are brain-storming sessions, conceptualizing and synthesizing experiences, and finally organizational sessions in which documents are produced in which the staff can become committed to.

5. Various resources of the University are beginning to be used in a much more functional manner. The Carver Curriculum Materials Center personnel will help students utilize its materials in achieving the objectives of the modules. The media people will utilize computers, TV, etc., in helping both faculty and students achieve the objectives more quickly.

Recommendations to the Coordinators of the Project

1. A Process document should be kept which details how the staff has changed in working through the accomplishments of its objectives.

2. Summary reports are needed by the Sears Panel as well as by the University of Toledo staff so that all know what has been accomplished and the directions that need to be taken in the next phase.

3. An Organizational chart with communication scheme is needed to help others understand how the project is developing (Tie-in with Recommendation 1.)

4. The coordinators need to work through various means of involving the Planning Committee in order to get greater involvement of school people, community people and students in the planning stage. A program should be designed to get feed back from students and faculty on the Career Decisions Program as well as the newly developed teacher training program.

5. Within the next few months the modules developed by the staff ought to be reviewed by consultants in order to get some outside advice in terms of the directions the group is taking.

6. There needs to be a document in which this particular project fits into the overall plan designed, i.e. projects undertaken, ongoing projects, tasks yet to be accomplished after the completion of this planning grant and what funds will be needed in the next steps and for what purpose?

THE UNIVERSITY OF TOLEDO / TOLEDO, OHIO 43606 / [419] 531-5711

College of Education

October 11, 1971

Dr. Herbert Baker
2412 Carriage Drive
Toledo, Ohio 43615

Dear Dr. Baker:

As you are probably aware teacher training programs are far from perfect. Indeed, few teachers seem to praise their preparation once on the firing line. We acknowledge this traditional defect in our own program and are therefore in the process of making what we hope will be significant and beneficial alterations.

We further realize that Colleges of Education have been notoriously negligent in involving public school personnel in the development and operation of such professional training. We hope to rectify this fault by inviting you to engage with us in such development in the coming weeks. We are specifically requesting that you make known to us your suggestions and needs which we at the university should consider before a finalized program is developed. Such questions as: What courses should we offer which we do not now offer? How should the student experience be arranged to meet your particular needs in your schools? Is it feasible to train and utilize public school personnel as clinical professors? etc.

We wish to build programs in both elementary and secondary teacher education which are flexible enough to meet the specific needs of your particular school situation. If for example, you would like to contract with us to be sent a specified number of student teachers each quarter or to be able to utilize our students in a particular fashion (such as sending our student teachers out in teams) we would like to be able to accommodate such differences between school systems and school buildings within a given system.

We are referring in this letter to the preparation of secondary teachers. We are also writing to your counterparts ~~systems~~ in other schools as an initial step in beginning dialogue. We will be in phone contact with you in the near future regarding possible times we could meet and discuss your suggestions. Your help will be most appreciated.

Sincerely,

David M. Balzer
Director Student Field Experiences

Richard H. Hersh, Chairman
Secondary Education

DMB/RHH:tk

APPENDIX F

STATUS REPORT, NOVEMBER 29, 1971

SEARS PLANNING GRANT

A Status Report

November 29, 1971

Page six of our planning grant proposal lists six major tasks we intend to accomplish within the planning grant period. This report will describe efforts to date with regard to fulfillment of those tasks as related to our planning organization, communications network, schedule of events and anticipated needs.

Faculty responsible for training undergraduates to become teachers are currently housed in two divisions: 1. Curriculum and Instruction; 2. Educational Foundations. The Curriculum and Instruction division is divided into five departments: 1. elementary; 2. secondary; 3. instructional technology; 4. special education; 5. vocational education. (at this point in time the latter two departments art not actively engaged in our program planning as it relates to the Sears grant). The dividion of Educational Foundations is divided into three departments: 1. Social Foundations: 2. Educational Psychology; 3. Evaluation and Measurement. Each division has a chairman as does each department.

Three coordinators have been designated as those persons responsible for providing leadership in planning. The director of the planning project is Dr. Castell Gentry, also department chairman of Instructional Technology. Dr. Hughes Moir is a coordinator and department chairman of Elementary

Education. Dr. Richard Hersh, the third coordinator is department chairman of Secondary Education. The coordinators have developed extensive planning strategies (see enclosed PERT charts, etc.) as well as a workable communication system. (See figure one.)

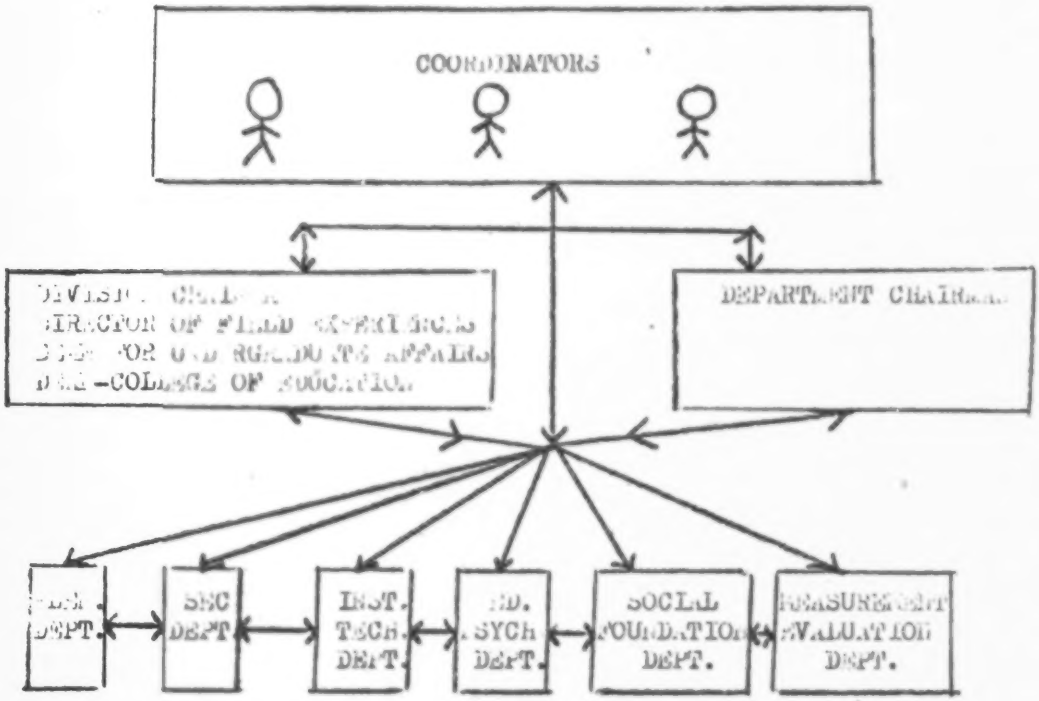


Fig. 1

Strategies and Rationale for Planning Effort

The development of staff morale and committment to a new program was designated as initial thrusts in planning. Faculty in the past have been reluctant to accept "edicts" from administrators. While most of the faculty saw reason to move in the direction of a competency based program most were asking for greater control over ultimate substance of such a program. The initial effort was to convince faculty that they were indeed in control of both direction and substance. Each department was afforded the opportunity to "retreat" off campus for two days this fall to write modules (a module is a cluster of behavioral objectives, possible teaching strategies to reach those objectives and criteria to assess whether or not the objectives have been achieved) in their own areas of expertise. Each department has been on a retreat and each department has developed modules. The modules are not complete (especially criterion items) but enough has been done such that faculty now realize that this program is a "grass roots" endeavor, we are all in this together and that a new program demands that each faculty member must make public his objectives and assessment procedures, such that a dialogue may take place within the faculty as a whole, rather than as competing groups. Enough has been done on module development such that we can proceed to the next step of sequencing the modules first within each department, and then across departments.

Catalogue and time contingencies have forced us to move quickly into sequencing and developing a programatic structure and staff

organization which might implement such a program in the fall of 1972. Collection of the modules will enable us to start this process at the beginning of winter quarter and continue throughout the planning period. Piloting of modules for testing purposes will be done voluntarily. A number of faculty are planning to try-out their modules during winter and spring terms. The accompanying PERT and flow charts outline the planning tasks necessary for fall 1972 implementation.

In addition to developing staff morale and committment (we deem this part of the plan successful to date. The site visitor can provide correlative data.), the coordinators have pursued the following:

1. Members of the community, university student body, and public school personnel have been contacted to serve on the planning board as described in the Sears proposal. This board will convene in January to react to what has already taken place, and provide input with regard to the need for module revision and addition.
2. Contact has been made with elementary and secondary school personnel within the metropolitan Toledo area inviting them to plan with us a new program, especially with regard to field experiences. Favorable feedback has already been received. We are now planning to hold several planning conferences with the public school people (using Sears grant funds) to take place during the winter and spring quarters.
3. The coordinators have developed an evaluation proposal for both internal and external monitoring of any new program.

We are presently revising this proposal and attempting to determine appropriate funding sources. We consider such a plan as critical to the ultimate "revisability" of any program developed and a necessary "accountability" component. There are several levels of accountability. We at the university must be able to gather evidence that our graduates are indeed performing in a way which is congruent with our program objectives. We must also be assess whether or not those designated teacher behaviors are require make a difference to public school pupils. Data from both sources would be required to continuously improve any program.

4. Plans have been made to visit several operating competency bases programs such as Brigham Young and the University of H uston.

5. A "professional" year has been designed and accepted by faculty as the new format for professional education. The present program allows students to take 32 quarter hours (secondary) of professional education throughout the four years of college (45 for elementary) . . . . The new program would require all freshman to take three consecutive quarters of career decisions seminar in the freshman year (or combination of freshman and sophomore year) and then take no professional education courses until sometime in the junior year. Once the student begins his professional education he must take four

consective quarters of work in the college of education culminating, in the fourth quarter, with student teaching.

THE UNIVERSITY OF TOLEDO / TOLEDO, OHIO 43606 / [419] 531-5711

College of Education

December 8, 1971

TO: DIVISION DIRECTORS, SYSTEMS COORDINATORS, STUDENT FIELD EXPERIENCE DIRECTOR

FROM: Cass Gentry, Systems Coordinator

RE: Summary of Tuesday meeting

1. Decisions concerning Public school participation in field Experience

   a. Dave Balzer and Dick Hersh plan to complete and/or expand the following agenda for a meeting with Public school administrators and teachers in the secondary schools, for purposes of getting commitment to changing the school environment to fit the training of our students, and to gain access for our Secondary Teacher Trainees in to the public schools to satisfy field experience needs. Dave suggested this should be done by no later than December 20.

      1) to invite them to join us in planning field experiences for teacher intern.

      2) to consider model alternative plans for Public School/ College coordination of field experiences.

      3) to study the constraints on The College and on Public School that must be accounted for in adopting a plan.

      4) to compare the college's view of what skills and competencies teacher interns should have, with the public school view.

      5) to determine the advantages and disadvantages of the field experience association to both college and public school.

      6) to list the responsibilities of both college and public school for the field experiences.

      7) to assess the degree of commitment toward one of the proposed (or some modified version) alternatives.

b. Having completed the agenda and combined it with a letter of invitation Dr. Balzer and Dr. Hersh will select individuals from the following school districts as participants. The letter will go to an administrator in each district, asking that he bring one teacher with him. The meeting date recommended by the group was January 14, 1972.

1) Witmer
2) Washington
3) Sylvania
4) Ottawa Hills
5) Oregon
6) Clay
7) Maumee
8) St. Johns
9) Toledo
10) Evergreen

c. Dr. Nussel said that he would check to determine whether CERES can absorb some of the expense of the meetings.

2. The group discussed Dr. Ishler's memo of November 4. The consensus regarding the involvement of Art, Music, and Physical Education was:

a. Each should be invited (Art and Music together) to discuss how they fit into the new professional teaching program.
b. Given the differentiated staffing concept that our model is dedicated to, they will be asked, what portions of their current offerings are relevant to the training of elementary teachers.
c. Dr. Gentry will set up meetings between these three groups and our group in the early part of January.
d. It was resolved that our group should also continue discussion about, and try to resolve the issue, of which areas of consentration, and what degree of consentration our students should be responsible for.

cc: Dr. Hersh
Dr. Ishler
Dr. Gibney
Dr. Balzer
Dr. Moir
Dr. Nussell

APPENDIX G

COLLEGE RETREAT: FEBRUARY 3-5, 1972

PROPOSED GENERAL OUTLINE FOR

COLLEGE RETREAT

FEB. 3-5, 1972

Thursday, Feb. 3, 1972

9:00 - 10:00	Arrival, Check in, Self-orientation
10:00 - 12:00	Overview and Purposes of Reatreat 1. What we hope to accomplish -- OBJECTIVES A. Structured Quarter format for professional year. 2. Alternative structures, teams, content B. Identify instructional teams -- i.e. faculty arrangement C. Determine content of program -- sequence of modules
12:00 - 1:30	Lunch
1:30 - 2:00	Unpack, relax
2:00 - 4:30	Small groups to discuss professional year alternatives (pre-selected groups of Elementary and Secondary faculty with foundations and media folks mixed in)
4:30 - 7:00	Break and dinner
7:00 - 8:30	Large group synthesis: Conclusions from afternoon discussions -- small group reports -- an attempt to reach tentative closure
8:30 - 10:00	

Friday, Feb. 4, 1972

7:30 - 9:30	Breakfast
9:30 - 12:00	Department meetings to duscuss: (1) How each department views organization (2) How staff can/should be organized
12:00 - 1:30	Lunch
1:30 - 4:30	Interdepartmental small groups meet to determine most effective way to organize staff for ~~xxxxxxxx~~ instruction (These groups might be self-selected on the basis oof which area - elemetnary or secondary - individuals wish to work in; o: on the basis of who one would like to work with; or what part

or year or quarter they would like to work with.)

4:30 - 7:00 Dinner

7:00 - 8:30 Large group synthesis: "How should the staff be organized?"

Saturday, Feb. 5, 1972

7:30 - 9:00 Breakfast

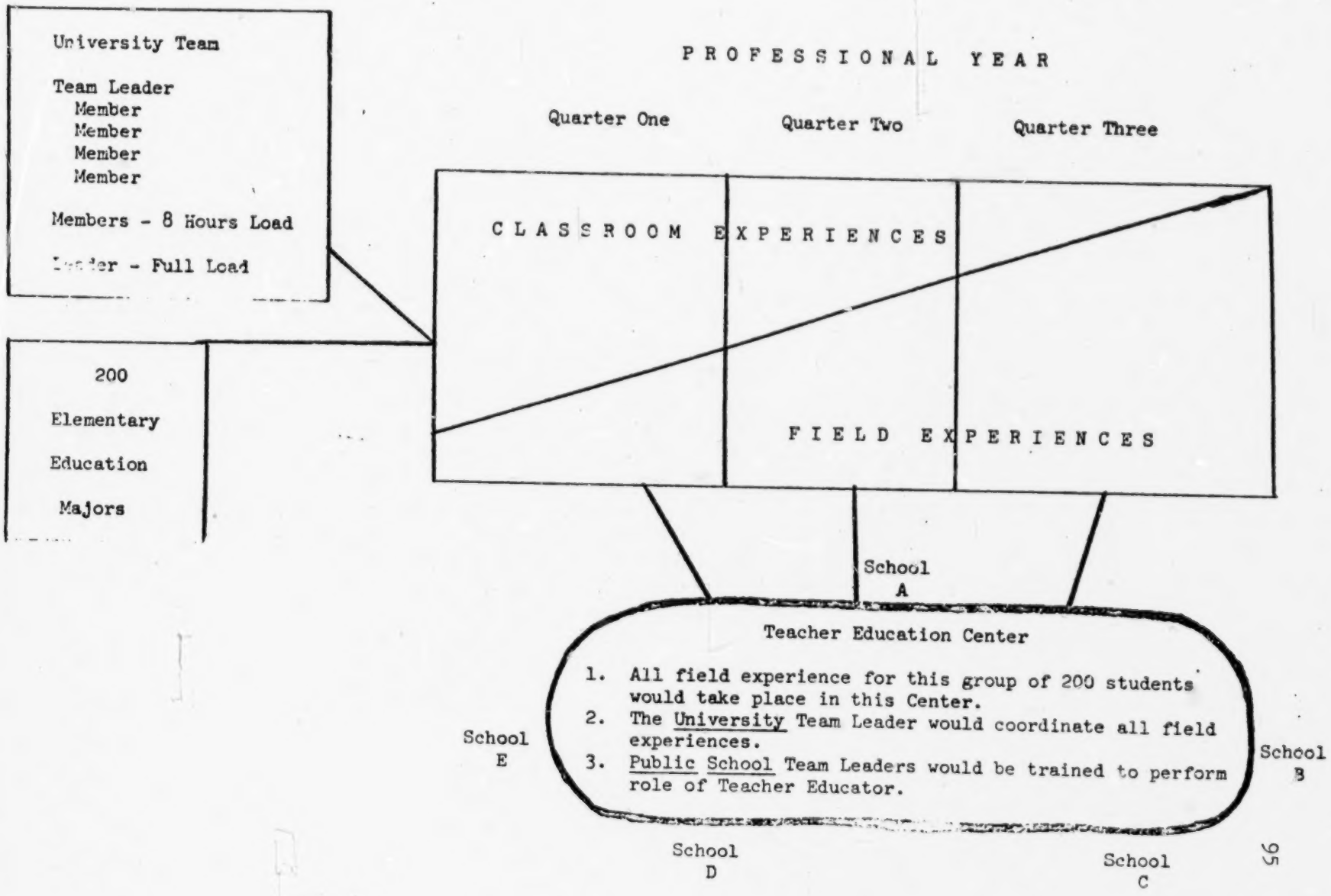
9:00 - 11:30 Instructional teams meet in small groups t· attempt to sequence, organize modules into an instructional program. (The formulation of these groups may be randomly determined, or on the basis of groups that met Friday afternoon)

11:30 - 1:00 Luch

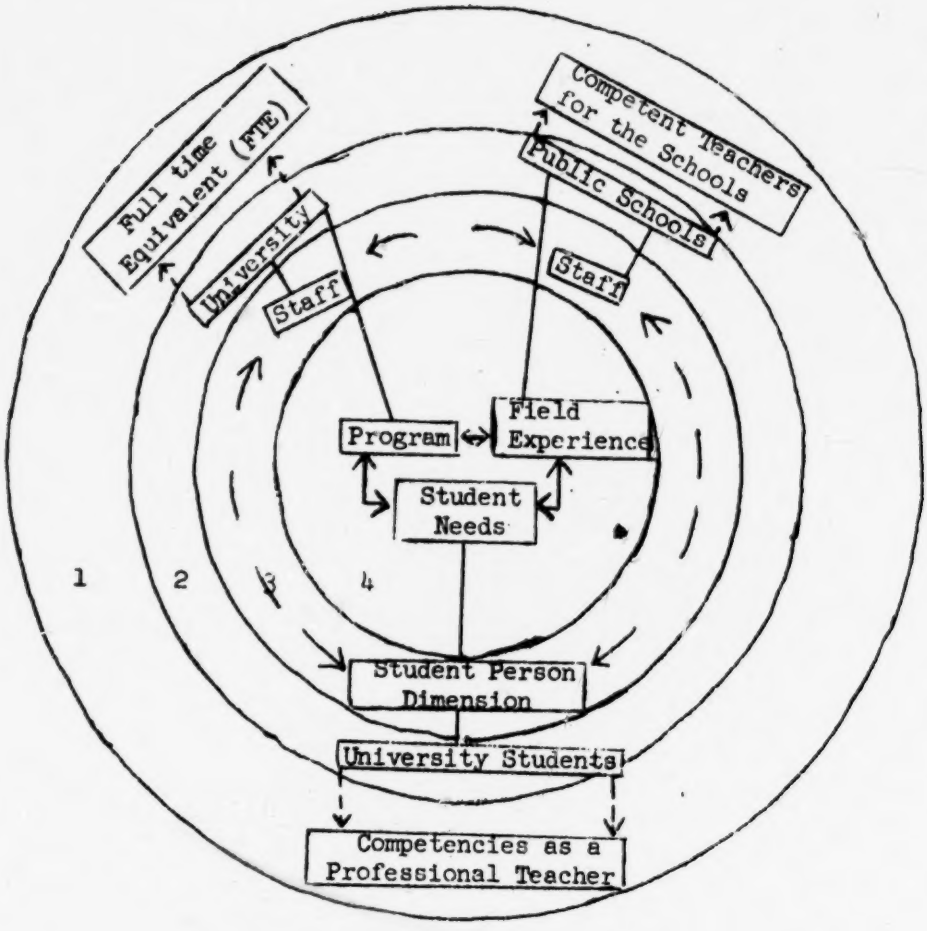
1:00 - 3:00 Large group synthesis:

1. What needs to be done?
2. Tasks for the quarters prior to Fall, '72
3. Conclusions relative to
   a. format for professional year
   b. faculty organization
   c. content and sequencax of instructional program

3:00 - Departure


University Team
Team Leader
Member
Member
Member
Member
Members - 8 Hours Load
Leader - Full Load
200
Elementary
Education
Majors
PROFESSIONAL YEAR
Quarter One
Quarter Two
Quarter Three
CLASSROOM EXPERIENCES
FIELD EXPERIENCES
School A
Teacher Education Center
1. All field experience for this group of 200 students would take place in this Center.
2. The University Team Leader would coordinate all field experiences.
3. Public School Team Leaders would be trained to perform role of Teacher Educator.
School E
School B
School D
School C

A Synthesis of the Retreat at Walden Woods
People and Program Constraints



1. Payoff Circle
2. Resource Circle
3. Person Constraints
4. Program Constraints

To: Cass, Dick, and selected interested parties identified at the discretion of the former two

From: Moir

Date: Feb. 24(date of planning session for retreat)

The attached organization plan for the retreat was reached after some hours of thought and ideating by Moir-Hersh. We did so with three basic objectives/questions in mind, and to s me extent in a preferred order:

1. What should be the organizational structure of the professional year?
2. How should faculty be organized to carry out the professional year?
3. Determine the content/sequence of the program?

Each of these questions needs to be answered soon. The retreat affords the opportunity to readch closure, though it is unlikely that closre will take place. At best, perhaps we, as co-ordinators, will have sufficient information and thinking of the larger staff to facilitate eventual closure. ~~The~~

Each day is organiz ed around one of these questions~~?~~. By the end of each day we, as a total stafff, should readh some tentative view of the eventual end.

There are, however, two additional concerns that need to be explored:

1. What is, in fact, going to happen in Fall, '72?
   a. Full implementation
   b. No implementation, though existing courses will or may be taught using the modules in some form
   c. Pilot/experimental program involving those who are really committed and interested
   d. None of the above

Though the implicit assumption is, on our part, the first of these (i.e., "a"), we need to check with the Dean and with the staff if, in fact, this is the case. We should also be in a position after the retreat to determine ~~xth~~ which of the alternative answers should be the c ase.

2. Assuming that the Dean will not be able to be at the retreat for the full three days, what, specifically, will be his role, when should be there, and how does he fit into the organization suggested?

Walden Woods Conference

TEACHER EDUCATION CENTER CONCEPT

For each elementary (Secondary?) team there will be a Teacher Education Center. A Center is defined as: a cluster of Multiunit schools, where field experiences for that College Team's students would take place. A Center would be made up of four to five schools representative of both urban and suburban conditions.

It is recommended that there be a policy-making committee for the Center, composed of:

1. A representative from the University Team
2. A representative from students assigned with a Team
3. A representative from the public schools

The public school multiunit team members would be trained to perform certain functions as Teacher Educators under the supervision of University Team members.

REACT REACT REACT REACT REACT REACT REACT REACT REACT REACT REACT REACT

Walden Woods Conference

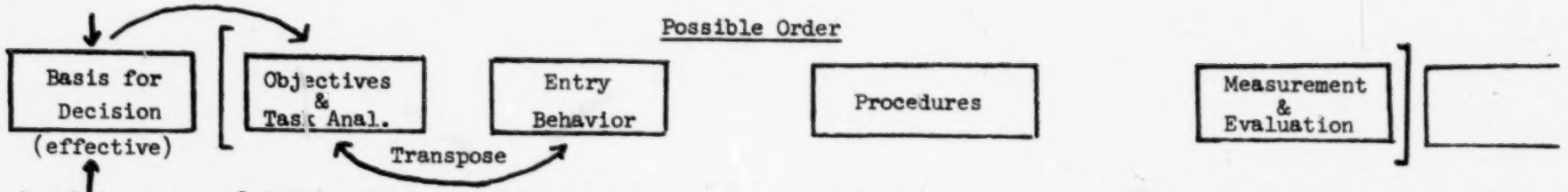
SATURDAY MORNING

1. Determine the Conceptual Framework(s?) for ordering modules, with agreed upon clusters of modules:

2. Establish the criteria for selecting, and the process for deciding Team composition:
   a. team competencies
   b. sociometric data
   c. interdisciplinary composition

3. Determine tasks to be continued or initiated, on return to Campus:
   a. Form working Teams that will be responsible for a cluster of modules, and a group of students
   b. etc.

SECONDARY OVERVIEW - REVISED



1 valuing

1 "awareness"

1 Rath's value analysis

1 "Philosophy"

2 Group analysis

2 inst. systems

2 Behav. Objec.

2 Task analysis

1 Human devel.

2 Motivation

1 Community analysis

1 Social Class & mobility

1 Community analysis

1 Adolescent behavior

2 Behav. Mod.

2 Conceptual learning

2 Problem solving

--Motivation--

1 Inquiry skills Self

1 Torch Butt

2 Learning Centers

1 Generation of Non-Innert Ideas

2 Advanced organizers

2 Social control, teacher control

3 Tis-'taint

2-3 Selection of teaching strategies

X Equipment operation

2-3 Selection of media

2-3 Utilization procedure

X Sources of media

2-3 Test results

3 Intro. to research

1 = first

2 = second

3 = third

X = Whenever the student needs the skill to complete another module

Walden Woods Conference

Elementary Group II

CONCEPTUAL FRAMEWORK FOR THE INCLUSION OF CONTENT

Needs Assessment	Learn:	Learn:
Audience Identification	What to teach How to teach What is worth teaching	Learn how to determine what students have learned.

Rule 1: Both curriculum and behavioral evaluation is inherent in all aspects of the model.

Rule 2: Process skills (i.e. inquiry) will be reinforced and extended throughout the model.

Rule 3: Knowledge, skills, concepts, etc., are to be practiced and related to realistic settings where possible (simulations, field experiences, etc.).

WALDEN WOODS CONFERENCE

Elementary Group I

TEAM 200 students

5 team members (1-2 would be members of 2 teams)

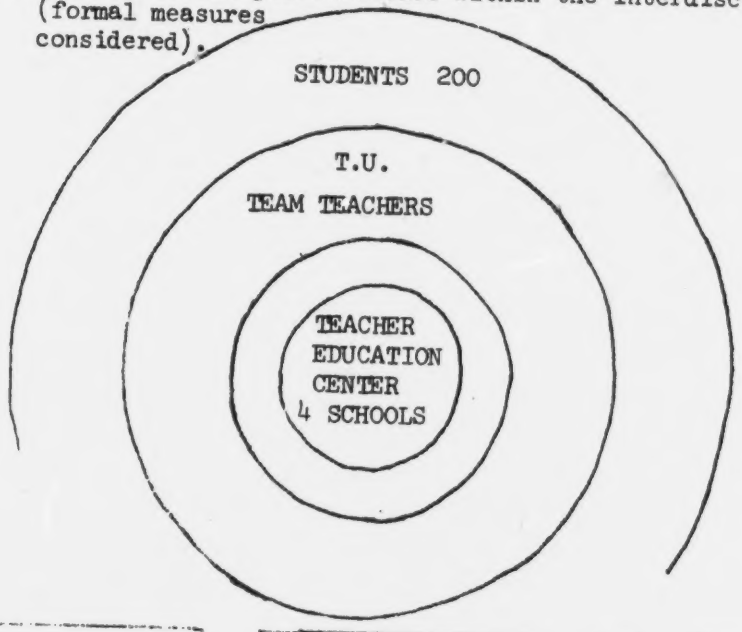
Personnel from our T. Ed. Center

Graduate students

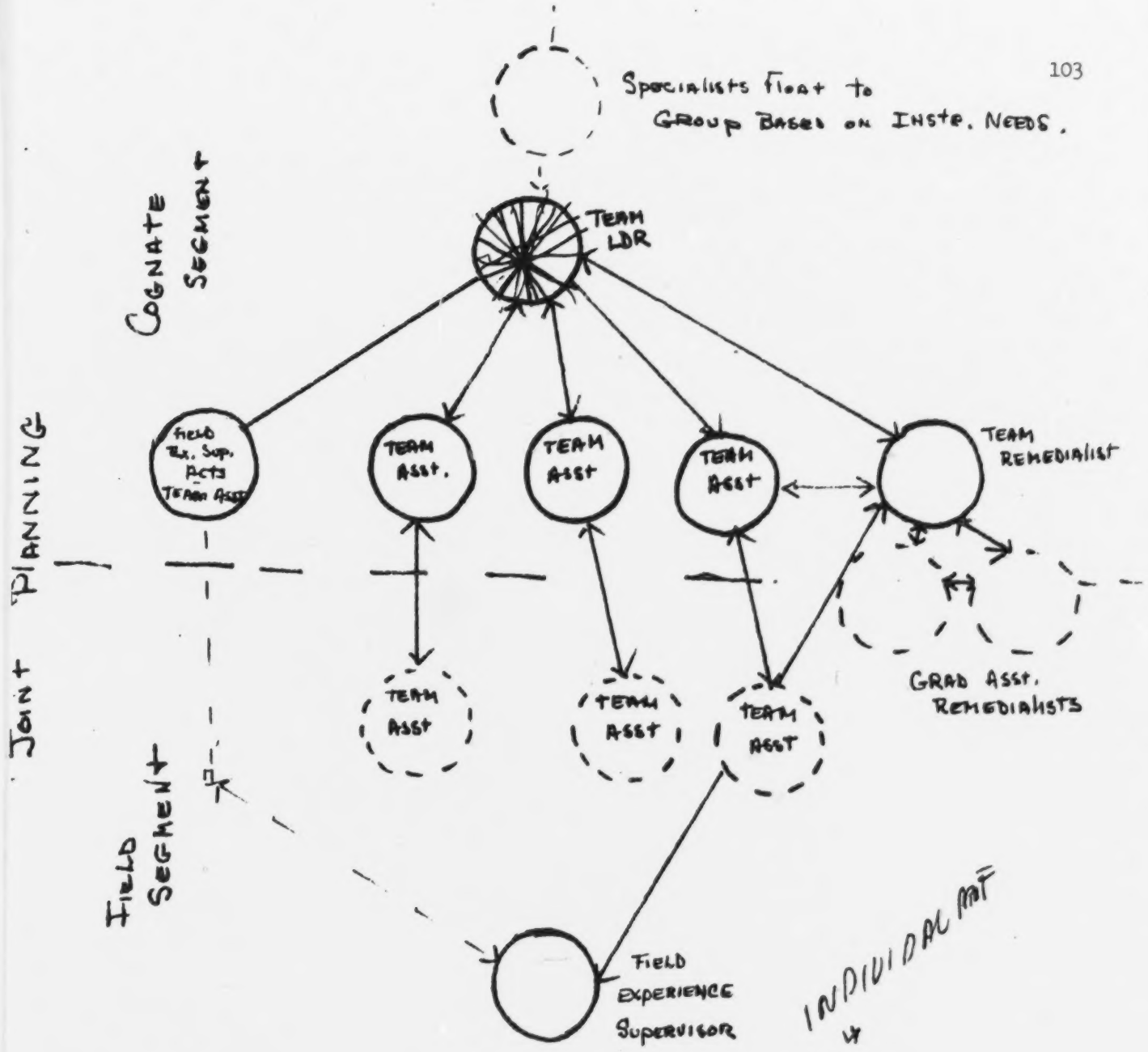
Secretary

CRITERIA FOR T.U. TEAMS:

1. Teams stay with students thru out professional experience.
2. Inter/Intra-team member exchange.
3. Team members interact with department.
4. Interdisciplinary representation on each T.U. team.
5. Self-selection possibilities within the interdisciplinary framework (formal measures considered).



Curr. Modules	Curr. Modules	Curr. Modules
LAB	LAB	LAB
Ed. Psy., Societal, Media	Ed. Psy., Societal, Media	Ed. Psy., Societal, Media



Staff Roles Based on Curriculum (Module) Functions

Planning
Implem

PS
2-W
B-F

Lines Represent Comm. chan's

Leonard

NEW YORK UNIVERSITY
School of Education
WASHINGTON SQUARE, NEW YORK, N.Y. 10003
AREA 212 598-1212

Student Teaching Office
4 Washington Square Village apt.1M

March 1, 1972

Mrs. Jane Otten
American Association of State Colleges and Universities
Office of Urban Programs
One Dupont Circle
Washington, D.C. 20036

Dear Jane:

Forgive the lateness of the report but I have been conferencing for the past two weeks.

The report has two sections. Part 1 is my reaction to the Waldenwoods retreat and Part 2 includes materials related to the retreat developed by the participants.

These two days at the retreat were extremely exciting. The faculty were truly involved in participatory democracy and the results were excellent. The Sears Foundation really has spent its money wisely.

The Site Visit team needs to gather soon to discuss:

a/ evaluation of the projects by the project personnel as well as by the site visit team (This includes discussion of the final report form.)

b/ ways of helping these planning projects implement their new programs

c/ seed money to begin 5 more planning projects

d/ ways to share information between the first five projects

I hope all is going well with you.

Cordially yours,

Howard Coron

Howard Coron
Director

HC/hc

Memo: Mrs. Jane Otten, Mr. Bill Witsok, SITE Visitors and University of Toledo Staff

From: Howard Coron

Re: February 3-5 Site Visit. University of Toledo

I. Background

During the months between the first and second site visit certain tangible accomplishments were made by the project members.

A. continuation of production of modules by individuals and groups.

B. guideline meetings with public school personnel as to the ways the developing program could reflect the thinking of these professionals.

C. visit to Brigham Young University by administrators of the project for the purpose of comparing its program with their ideas and to glean ideas useful to the group.

D. continual clarification by the coordinators as to the direction the group wished to take and ways in which they could not only facilitate this movement but play an active role as faculty members, in directing it.

The intangible accomplishments became evident to me as I viewed the interaction during this visit and will be discussed in terms of group interaction, attitudinal change, support from administrators, and a number of other factors.

Prior to this meeting I was informed by Dr. Hersh that there were a few minor complications that interfered with the steady development of the project but that these problems had been overcome (See attached memo from Dr. Hersh.)

II. Retreat of the Undergraduate Faculty

A. Place: Waldenwoods, Michigan

B. Physical facility: Large building with small and large meeting rooms and sleeping dormitory used by male staff. Female staff slept in small heated bungalow situated nearby, Dining facilities were in the main building.

C. Attendance: Almost the total undergraduate faculty (approximately 50) participated in the retreat and included Dean Dixon. Groups represented were: early childhood, elementary, secondary, educational psychology, social foundations, educational research and educational technology. The financial office of the School of Education was also present during part of the retreat.

/~1/3 of the faculty are new to the University within the last two years and at least ½ the faculty had been at the institution 4 years or less. The faculty attending had a youthful appearance and were predominantly male. In addition, graduate students actively working with the undergraduate staff were also participants. (The participants appeared to be change oriented; in other words, no obvious patterns of rigid behavior were evident although certain individuals did evidence, during the retreat, some inflexibility toward "thinking big". This statement will be discussed at later points during this report.)~/

D. Orientation: Participants had received outline of what might be accomplished during the retreat (See appendix 2).

E. Role of Site Visitor: During the period between visits I had telephone conversations with a coordinator of the project and was able to infer the role to be played.

> Participant-observer. The group preferred active involvement of the site visitor, not just a reviewer of decisions made and directions taken after the fact, but as an "inputer" into those decisions so that the continual group process would not be disrupted. Feedback during the process was more important than after the visit. Time would be taken for formal as well as informal reaction periods during the visit and input made as an active member of the planning groups. With this in mind my role was more active during this site visit than in the prior visit.

Body of the Report: Site Visit Report

The comments to follow will not have any format but instead will be a compilation of observations, comments, suggestions and hopefully will be useful to the participants.

1. Registration period and other observation periods: As I wandered around I overheard a few comments concerning the power that the staff had in effecting change. Several faculty freely discussed with each other their feeling of impotence in changing program based on what they wanted to do. I observed the coordinators moving into these situations and giving examples of how the staff was able to effect change: the career decisions program, the support from administration concerning this Sears project, et cetera. During the two days I was able to observe the following:

coordinators and others utilizing individual faculty suggestions. This was done in several ways:

reinforcing the suggestions by repeating them publicly and suggesting to faculty that they consider these ideas before moving on to other suggestions. Flight behavior was discouraged by asking for closure.

when individual faculty brought ideas to the coordinators at informal times the coordinators supported individual faculty members by either bringing the ideas to the formal sessions or by asking the individual to repeat his or her suggestion to the group.

by continually reinforcing to the whole group that the program was to represent the best thinking of the group and that decisions made could be implemented because administration and the budget officer were there to help set up parameters.

coordinators permitting leadership to develop in small and large group meetings by: talking as a participant and not as an administrator. When faculty looked to the coordinators for authority decisions the coordinators subtly turned the decisions back to the group. (It is apparent that the coordinators have spent a great deal of time discussing their role for there was great consistency between the three individuals).

quite often the coordinators behaved in such a manner that indicated that they were sensitive to the fact that certain individuals had some fear about expressing themselves. As the two days progressed, a greater number of individuals talked and from other comments I overheard this was the first time that these individuals were heard from, thus, that which the coordinators were doing was freeing individuals to take some risk.

2. Preparation for the Conference

Equipment and secretarial help: an overhead projector, duplicating machine, tape recorder, typewriter, and other secretarial supplies were brought by the group. A secretary was available at all times to type and duplicate materials needed by the group. There was almost instant feedback to the group when closure was reached (see attached materials).

The budget officer was invited to the retreat to give information concerning the needed student-faculty ratio and to explain how the school of Education was funded by the state. By setting these parameters early in the planning stage the group was able to come up with acceptable alternatives to their planning.

A small display area of multi-media materials and texts was set up for perusal by the staff.

3. Administration Support - Problems raised related to points made

Dean Dixon made several comments to the group. The major emphasis being that the faculty "think big" and that he and his staff would support the faculty in any way they could. His personableness added to the sense of good-feeling that developed during the two days. Imaginary constraints were done away with by setting real constraints and his support of the coordinators of the project was quite visible.

Some of the real constraints mentioned were:

- enrollment was down in the School of Education and especially in the Freshman group
- if the faculty develops a team-interdisciplinary program, a ratio of 40 students to one faculty member was needed.
- despite low enrollment faculty would not be dropped
  The key point here was that the staff and resources would need to be redeployed. The group should figure out ways and means of more effectively utilizing its strengths. At the same time the group will need more funds to implement its competency-based program for many self-instructional media programs will have to be developed for individualization of instruction.
- work out relationships with the rest of the University to get additional credit points for the teacher training program

It would be highly appropriate for the group to quickly meet with other school faculty and to touch base with them in terms of this new program. I strongly recommend that an information paper be developed for distribution to the faculties describing what has been accomplished, objectives of the program, ways in which inter faculty support can be developed.

- the faculty needs to develop a program which considers the working student unable to go full-time. This was especially important in terms of the need to locate and support minority group members as well as poor majority group

members as they go through a teacher training program.

- the faculty must consider how to upgrade their own skills as well as how to help field personnel become more effective in their role in the field. (He was being specific about the role field personnel were to play in training pre-service personnel but the implicit meaning was that they would become more effective with their own students as they worked with the University students).

- the faculty would need to rethink their own teaching schedule to be consistent with the program they were developing. The implication of this last statement is one which will need to be explored in great depth by the faculty. Course load may be usurped by program (module) involvement. Longer hours and greater student-faculty involvement, more field participation may be part of this possible major change. Differentiated staffing possibilities based upon skills and interests may evolve.

- full-time student teaching may need to be re-thought on the basis of the competency-based program. What behaviors will be needed, during what period of time, to indicate that the pre-service person can behave in a way defined by the faculty. Student teaching needs to be redefined in terms of accomplishment of specific tasks and not the amount of time spent in a school. As the program develops students will be doing a great deal more through the use of various mediated programs.

Module Development

In the writing of the modules many individuals have stated behaviors to be achieved which contain many implicit and explicit values and philosophical assumptions. What is needed at this time is an overall philosophical statement (which may be available in all of the writing that has been done over the past years at the University) so that particular modules can be assessed in terms of an overview.

The faculty will need to review all modules produced by the faculty as well as those produced in other institutions so that missing pieces are produced and others may not have to be duplicated. The five institutions receiving the Sears grant should join forces soon in sharing their individual production.

Tasks Acheived and Major Break Throughs During the Two Day Site Visit

- The coordinators of the project presented several organizational schemes to the faculty for the development of the new program. These were tentative ways of looking at the program. It was felt by the coordinators that having some guidelines for the group was helpful for focusing on the decisions to be made. It was apparent that the coordinators were not totally committed to these suggestions as stated by them, but they had done work to facilitate the group process.

- a major premise was introduced and accepted during the retreat and this was that individual faculty members were breaking away from seeing themselves as specialists only in their particular areas but as team members who would utilize their expertise and develop additional competency in each others' disciplines. In addition, Ed. research, Educational psychology, Educational media

and social foundations people began stating ways in which they would become more involved in field experiences and in working with either elementary or secondary trainees. Another aspect of this development, though not stated explicitedly but somewhat implied by the interaction was that elementary and secondary trainers would learn from each other as modules were developed which have skills needed to be achieved and accomplished by all trainees.

- In discussing the program, new faculty work profiles were implied. Faculty members would have to become highly flexible, filling in and substituting for other members as individualization of training students developed, keeping records on students in such a manner that any other member of the team would be able to follow a student through the completion of specific modules. This last point was discussed several times and it grew out of a concern for students who drop out of the program and then seek re-admittance, as well as for transfer students. Faculty time could no longer be thought of in terms of "how many courses taught and the hours" but rather committment to a group of pre-service persons and their field personnel. (Accountability in its best definition).

- in searching for alternative staffing patterns the group went through making many decisions including random self-selection for multi-disciplinary teams, the development of multi-unit colleges or teams within the School of Education, an elementary team, a secondary team, elementary and secondary teams with other discipline members. At the end of the second site visit day, the group had formed multi-disciplinary teams based on self-selection with emphasis on either elementary or secondary training.

- the groups set as their task the following:

1. determine needs of a)pre-service trainees b) faculty in both the university and schools and 3) students in the schools

2. do task analysis related to the determined needs

3. develop task prescriptions

4. implement the programs

5. evaluate the program consistently and check through the accuracy of points 1-4

6. review modules: sequence, rewrite, substitute, add when needed

- Despite the lessening of importance of the departmental disciplinary structure team members would continue their alliance with their departments. This was considered important for the following reasons:

    1. continual check by the department that new advances in knowledge and and technique be incorporated into the teaching teams through continued analysis of the developed modules.

    2. research to be developed by the various departments needs to be directed toward viewing the whole program as well as special aspects of each program.

    3. the faculty of each discipline felt that they needed the input and evaluation from their fellow professionals so that their own skills in their particular areas continued to develop

- as modules were developed and refined and others brought in from the larger education community, they would become "lesson plans" for other members. Each member of the team could substitute for another as they so desired and in case they wish to further differentiate their roles.

- the sequencing of modules was discussed at great length and it was finally decided that some modules are not dependent upon learnings from other modules. Therefore, the program to be developed would incorporate two major thrusts - a sequenced period and a non-sequenced period of pre-service training.

The retreat continued one day longer than the site visit and Richard Hersh has written a report describing the decisions made and the projected directions of the project. (See February 16, 1972 letter to Howard Coron)

Some Suggestions for the Project Group

In discussion of the sequencing of the modules several problems will have to be discussed and procedures developed:

1. What happens to pre-service individuals who drop out of the program and return after a long absence? Will there be retesting of the skills learned at a previous time?
2. If there is a long period between learning specific skills and application of these skills to the field experience, who will ascertain whether the student is able to utilize effectively skills learned?
3. Do all students go through the sequence of modules in exactly the same time schedule? the same sequence? Can there be some self-selection within both the sequenced and the non-sequenced modules?

- Money will be needed to develop individual and individualized instructional modules with associated media systems. Faculty will need to be freed at various points within their team schedule to develop these modules or to review modules developed by others. The administration of the School of Education must consider ways of redeploying their staff to facilitate this development as well as to seek additional funds. Funding groups will be most impressed if the administrators can present plans which discuss how current funds available have been used more effectively than at previous times.

1. Who will develop ways and means of more effectively utilizing current funds? Should the faculty, now having learned about the economics

of funding School of Education programs, have a task force to work in conjunction with the budget officers so that they can figure out alternative means to utilizing money within the budget?

2. The Sears money obviously has helped the group accomplish a number of objectives in this Planning, Phase I of the project. The group should consider approaching Sears and other foundations for implementation of this newly developed program through additional funding.

- Since the project in effect has shown ways in which seed money can make for institutional change the coordinators of the project should select and document those aspects of this change process that may have implications for other Schools of Education.

- modules developed should be checked against a general statement of goals and objectives developed prior and during the retreat. Modules should also be shared with public school personnel for their evalaution, input and basically for their support. Some testing of the modules might be done prior to the summer.

- The coordinators of the project must now consider ways of helping the group develop additional leaders to work through the various tasks that need to be accomplished. It is too easy for the three coordinators to do all of the work themselves. It was obvious during the retreat that the coordinators were moving in that direction, whether consciously or unconsciously, but now tasks must be defined, a PERT chart developed, and responsibilities allocated.

- Many faculty members had some difficulty choosing elementary or secondary teams to become associated with, and some teams appear not to have all five disciplines represented so there should be some decisions made whether everyone should become part of one team or can they be members of several teams.

THE UNIVERSITY OF TOLEDO / TOLEDO, OHIO 43606 / [419] 531-5711

College of Education
Department of Educational Media and Technology

February 16, 1972

Dear Howard,

Herein and herewith is the summary of our last retreat resulting in "the spirit of Walden Woods."

In terms of the process involved it was our objective to get each faculty member aware of the contingincies and parameters confronting the development of a new program. With the financial report, student enrollment analysis, and the discussion with Dean Dickson we accomplished the objective. Our focus, as you well know, is to develop a program composed of interdisciplinary teams to work with a specific group of undergraduates for their entire teacher education program. The faculty was very tense (100% were in attendance) the first two days because each faculty member had to deal with peers concerning teaching and curricula matters. By the final day not only was the entire faculty approving of the team concept but we had developed tentative teams and were working in those groups for the latter part of the retreat.

The following were the conclusions of the faculty; 1. A completely new undergraduate program will begin in the fall of 1972. All faculty will be working in interdisciplinary teams (elementary, secondary, or both) 2. The new program will consist of faculty written modules which will call for pre and post test data gathering and allow for individualized instruction throughout the program. 3. An arrangement will be worked out with area schools in which teaching centers will be developed. Such centers will be assigned to specific university teams and the university team will teach in those schools methods

modules as well as prepare specific in-service courses for the staff of each building--we are thus wedding pre- and in-service as part of teacher training.

We are now in the process of redoing our schedules for next year and taking care of the nitty things that must be done to run any program--notifying students, planning registration procedures, etc.

We have also identified material and resources needed for implementation which we know we will not be able to procure on an austerity budget.

Video-tape equipment

study carrels equipped with proper hardware for self-instruction, data processing hardware and software development to monitor each individual's progress, an independent assessment team to gather data in the new program. Released time for faculty to plan, write curriculum, and evaluate our progress.

We believe that we need approximately $100,000. to go full fore for two years. The program would then be self sustaining and could easily be continued with institutional in-house funds. We plan to apply to several agencies for such monies including SEARS.

Enclosed please find materials coming out of the retreat. Thanks for coming up and helping out. Hope to see you at our next effort.

Dick

APPENDIX H

ELEMENTARY PROGRAM "CORE" MODULES

To. Elementary Teams
From: Hughes Moir
Date: April 24, 1972
Subject: Meeting of team representatives to determine core program

Members Present: Drs. Ahern, Charlesworth, Cooke, Fotopoles, Leonard, Mallan, Michael, Moir, and Mutterer.

The ad hoc committee met April 19 at the Hospitality Inn in Rossford from 9:00 a.m. to 5:30 p.m. The two basic tasks that the group focused on were:

1. Selection of core modules for the four eight-hour "courses (312:320, 324, 328, and 340).

2. Sequencing of these modules on a quarterly basis. It was assumed that each team would determine a sequence of each quarter's modules within the eight-hour "course."

The attached sheets indicate which modules were selected for each quarter. In addition, each quarter was designated to have an emphasis or thrust, that would provide a focal point for that quarter. Finally, we attempted to "guesstimate" the amount of time students would be in the schools each quarter. The number of weeks suggested is based upon somewhat incomplete data.

It is difficult to attempt to describe in detail the process and thinking that went into this decision. The conceptual framework was a function of many different points of view, concerns, and synthesizing by each member of the group. Therefore, let me urge each of the teams to discuss with their representatives the total program and how each quarter relates to the overall conceptual design.

I would personally like to thank the eight individuals for their contributions and time. The discussion was always "on task" and fruitful. I think we're on our way. We can now set our sights on the May ~~6—7~~ 5-6 retreat with a much clearer sense of direction.

If you have questions or comments or anything, please, please bring it up at your team meetings or to one of the representatives. They will be welcomed.

Quarter 1

312:320 Elementary Teaching and Learning: I (Analyzing Problems and Analyzing Educational Setting).

I. Thrust

To explore, through inquiry processes, social and educational value problems and their manifestation in schools and the community. To inquire into the school setting and the role of the teacher in the school system.

II. Field Experiences: 2 - 3 weeks

III. Core Modules (Titles)*

1. Value Clarification, Philosophy, and Techniques
2. Science and Implications for Social Inquiry
3. Conceptualizing Concepts
4. What Kind Of World Do We Want?
5. Teacher's Role in Educational Institution
6. Basic Concepts of Educational Sociology

*The modules are listed by title

Quarter 2

312:324 Elementary Teaching and Learning: II (Systems Model of Curriculum, Teaching Model, Problem Analyzing Model)

I. Thrust

To explore curriculum design and the basic skills of teaching/instructing with particular focus on identifying and analyzing behavior.

II. Field Experiences: 2 - 3 weeks

III. Core Modules (Titles)

1. Instructional System Development
2. Teaching Skills Module (to be written)
3. Observation and Recording Behavior
4. Behavioral Objectives (DEMT #3)
5. Task Analysis
6. Behavior
7. Counting Behavior
8. Building New Behavior/successive approximations
9. Inference Identification
10. Individual Differences
11. Theories of Child Development
12. Problem Identification
13. Problem Solution
14. Diagnosis in terms of Behavioral Objective
15. Field Test of the Problem Solving Model

312:328 Elementary Teaching and Learning: III
312:340 Elementary Teaching and Learning: IV

I. Thrust

These two quarters will be considered - together - to focus on the application of teaching strategies/skills using the curricular areas as vehicles for the application. Because of public school constraints, 312:328 should be scheduled during the morning and will focus on language arts and mathematics, though these constraints are not viewed as binding nor universal. Likewise, 312:340 will focus on social studies and science and should be scheduled during the afternoon.

The specific teaching skills were identified as those relating to:

1. Planning (Stating Objectives, Diagnosis, Planning Instructional Strategies, Selecting Materials, and Evaluation Procedures)

2. Implementation (Specific objectives to be established by the team and individual student)

3. Evaluation (In terms of objectives of student and in terms of pupil outcome)

II. Field Experiences: total of 10 - 12 weeks (combined)

III. Core Modules (titles)

1. Childrens Literature (a total of 5)
2. Language Arts Modules (a total of 7)
3. Mathematics (to be written)
4. Science (to be written)
5. Social Studies (to be written, in part)
6. Selection criteria of media
7. Instructional Simulation and Academic Games
8. Utilization Procedures for Instructional Media
9. Operation of A-V Equipment (DEMT #10)
10. Preparation of Instructional A-V Materials (DEMT #11)
11. Basic Behavior Operations (Cohen-Green Modo 1-18)
12. Techniques of Self-Analysis
13. Teaching Problem Solving
14. Module for Creative Thinking
15. Development of Measurement Skills
16. Introduction to Language of Measurement and Research

It should be noted that the emphasis of these quarters is on planning, implementation, and evaluation skills rather than on "methods" courses, though the shift in emphasis is more by degree than an essential change. There is a need to create new modules (or modify existing modules) to focus on these three basic skills and their subskills in the four curricular areas. In addition, in these quarters (and in the other two as well) the teams need to specify the objectives and criteria for field experiences where appropriate.

APPENDIX I

OUTLINE OF ELEMENTARY AND SECONDARY TEACHER EDUCATION PROGRAMS

ADDENDA AND CORRECTIONS TO 1972-73 COLLEGE OF EDUCATION CATALOGUE

Corrections for Pages 16 and 17:

THE ELEMENTARY EDUCATION PROGRAM

The following are minimum requirements, including general education, in all fields.

	Hours	Totals
1. ENGLISH		
English 101, and 102 or 103 or 104, College Composition. . .	10	
English 270, Interpretation of Literature.	5	
Speech 101 or 301, Oral Communication.	4	
		19
2. MATHEMATICS		
Mathematics 121, 122, 123, Mathematics for Elementary Education Students	9	
		9
3. SCIENCE		
Biology 112, Survey of Biology	3	
Natural Science 102, 103, Matter and Energy.	7	
Geology 211, Earth Science and Man	4	
		14
4. SOCIAL SCIENCE		
Geography 101, Cultural Geography: Systematic	4	
History 102, Western Civilization and *History 122, American Civilization or		
History 101 and 102, Western Civilization or		
*History 121 and 122, American Civilization	10	
Political Science 120, American National Government.	5	
Economics 201, Economic Principles I	4	
Sociology 101, Introduction to Sociology or Anthropology 202, Introduction to Anthropology.	4	
		27
5. ART		
Art Education 111, Art Education in Elementary Schools I . .	3	
Art Education 112, Art Education in Elementary Schools II or Art 181, Introduction to Art	3	
		6
6. MUSIC		
Music Education 140, Public School Music Fundamentals. . . .	2	
Music Education 240, Introduction to Music for the Elementary Teacher	2	
Music Education 340, Elementary School Vocal Methods	2	
		6

Addenda and Corrections, Page 2

	Hours	Totals
7. HEALTH AND PHYSICAL EDUCATION		
Physical Education 108	3	
Physical Education 240, Physical Education in the Elementary Schools.	3	
Health Education 340, Health Education in the Elementary Schools.	3	
		9
8. PSYCHOLOGY		
Psychology 101, Principles of Psychology	4	
		4
9. CAREER DECISIONS		
Elementary Education 101, 102, Career Decision Program	8	
		8
10. ELEMENTARY PROFESSIONAL EDUCATION		
Elementary Education 320, Elementary Teaching and Learning I	8	
Elementary Education 324, Elementary Teaching and Learning II.	8	
Elementary Education 328, Elementary Teaching and Learning III	8	
Elementary Education 340, Elementary Teaching and Learning IV.	8	
Elementary Education 392, Student Teaching	16	
		48
11. AREA OF SPECIALIZATION AND ELECTIVES		
Area of Specialization from one of four fields (Language Arts, Social Studies, Science, or Mathematics)	20	
Electives.	22	
		42
		192

*Students who take History 121 and/or 122 must also select one non-western history elective.

Corrections for Page 18:

AREAS OF CONCENTRATION

Every student in elementary education shall select approximately 20 hours of course work beyond the general education requirements to be pursued as an area of specialization. The area of specialization must be organized around one of the following four fields of elementary school instruction--Language Arts (including Reading), Social Studies, Science, or Mathematics. The number of

hours to be taken in the field is left to the discretion of the student and his adviser with 20 hours recommended as a suitable minimum. Suggested courses for the above areas of specialization are indicated in areas of concentration VI, VII, X, and XI listed below. The other areas of concentration found in the area and course selections below should be considered as support areas for elementary school teacher preparation. Elective hours may be used for courses in these areas or for any courses the student wishes to take.

(The areas of concentration referred to in the above statement are found on pages 18, 19, 20, 21, and 22 of the 1972-73 College of Education Bulletin.)

Corrections for Pages 22 and 23:

RECOMMENDED SEQUENCE OF PROFESSIONAL COURSES
IN ELEMENTARY EDUCATION

	Hours
FRESHMAN AND/OR SOPHOMORE YEAR	
Elementary Education 101 and 102, Career Decision Program.	8
JUNIOR YEAR	
*Elementary Education 320, Elementary Teaching and Learning I	8
*Elementary Education 324, Elementary Teaching and Learning II.	8
*Elementary Education 328, Elementary Teaching and Learning III	8
SENIOR YEAR	
*Elementary Education 340, Elementary Teaching and Learning IV.	8
*Elementary Education 392, Student Teaching	16
	56

*These courses are a sequence and must be taken consecutively. The sequence may be begun in either the first or second quarter of the student's junior year.

RECOMMENDED SEQUENCE FOR STUDENT IN REGULAR ELEMENTARY EDUCATION PROGRAM

FRESHMAN YEAR	Qtr.Hrs.
Art Education 111.	3
Elementary Education 101, 102	8
English 101, 102	10
Geography 101.	4
Mathematics 121-122-123. . . .	9
Physical Education 108	3
Sociology 101.	4
Speech 101	4
Biology 112.	3
	48

SOPHOMORE YEAR	Qtr.Hrs.
Art Education 112 or 181 . . .	3
Geology 211.	4
History 101, 102, 121, or 122.	10
Music Education 140, 240 and 340.	6
Natural Science 102, 103 . . .	7
Political Science 120.	5
Psychology 101	4
Electives--Area of Concentration	9
	48

JUNIOR YEAR	Qtr.Hrs.
Elementary Education 320, 324, 328	24
Physical Education 240	3
Health Education 340	3
Econ. 201.	4
English 270.	5
Electives--Area of Concentration	9
	48

SENIOR YEAR	Qtr.Hrs.
Elementary Education 340 . . .	8
Elementary Education 392 . . .	16*
Electives--Area of Concentration	24
	48

*Students enrolled for 16 hours of student teaching will not be permitted to register for any other course.

Addenda and Corrections, Page 5

Corrections for Pages 24 and 25:

THE SECONDARY EDUCATION PROGRAM

	Hours
I. GENERAL EDUCATION REQUIREMENTS	47-51
1. English: Composition English 101 and 102 or 103 or 104	10
2. English: Literature English 270	5
3. Psychology Psychology 101	4
4. Social Science Political Science 120 and Electives from the Social Sciences, including Anthropology, Economics, Geography, Sociology, and History	13
5. Science Elect any basic science course such as Astronomy 110 or 115, Biology 112, Chemistry 101, Geology 101, Physics 131-132	3-4
6. Mathematics Elect any basic math course such as Math 115, 126, 127, 128 (See course descriptions for prerequisites.)	3-4
7. Physical Education Physical Education 108. Students with medical excuses may register for Physical Education 105. Military service does not substitute for the physical education requirement.	3
8. Fine Arts Elect courses from the following recommended lists: Art 181, 281, 282, 283, 284, 285 Classical Civilization 204, 205, 206, 250, 372, 375, 277 Philosophy 110, 201, 203, 301, 303, 305 Physical Education 182, 488 Speech Communication 220, 320, 422, 450, 455 Theatre 100 (or 300), 201, 202, 203, 333, 334	6-8

	Hours
II. PROFESSIONAL EDUCATION.	40
1. Career Decisions	
Elementary Education 101, 102, Career Decision Program. . . . (Prerequisite for all other courses in Professional Education.)	8
2. Secondary Professional Education	
Secondary Education 310, Secondary Teaching and Learning I.	8
Secondary Education 340, Secondary Teaching and Learning II or Methods of Teaching in the Special Subject Fields (Art Education, Business Education, Speech Education, Foreign Language, Music Education, Physical Education, Recreation, Health Education, Special Education, Vocational Education) plus appropriate education electives to total 8 hours.*	8
Secondary Education 392, Student Teaching	16

*Any student who is uncertain of his interest in his major teaching field should complete Secondary Education 340 rather than elect methods of teaching in a special subject field.

III. SUBJECT MATTER TEACHING FIELDS

Quarter credit hours vary and are determined by the choices made in teaching fields.

Secondary Education Teaching Fields Majors - Minors

Classification Plan*	Hours
A. One Major (with two additional minor fields)	45-58
B. Dual Majors (with no minor field requirements)	45-58 for each field
C. Comprehensive Major (with one minor outside major field)	67-82
D. Intensive Major (includes comprehensive major plus additional work within major field with no minor field required)	96-111
E. Minor Fields	30-46

The student preparing to teach in the secondary school may select for his field(s) of subject matter specialization which he will be qualified to teach by following plan A, B, C, or D above. The section of this bulletin entitled Teaching Fields fully explains the teaching fields available and the quarter hours and courses required for each major and minor field. Quarter hour requirements vary for each teaching field due to State of Ohio certification regulations and degree requirements of the College of Education.

*Most major teaching fields in the College of Education are Comprehensive Majors.

IV. FREE ELECTIVES. . . . . .(to complete 192 quarter hours)

RECOMMENDED SEQUENCE OF PROFESSIONAL COURSES
IN SECONDARY EDUCATION

FRESHMAN YEAR

	Hours
Elementary Education 101 and 102, Career Decisions Program.	8

JUNIOR YEAR

*Secondary Education 310, Secondary Teaching and Learning I.	8
*Secondary Education 340, Secondary Teaching and Learning II or Methods of Teaching in the Special Subject Fields plus electives. . . .	8

SENIOR YEAR

*Secondary Education 392, Student Teaching	16
	40

*These courses are a sequence and must be taken consecutively. The sequence may be begun in any of the student's junior year quarters or at the beginning of his senior year.

Corrections for Page 26:

RECOMMENDED SEQUENCE FOR STUDENTS
IN SECONDARY EDUCATION

FRESHMAN	Qtr.Hrs.
Elementary Education 101, 102.	8
English 101, 102, or 103 or 104	10
Physical Education 108	3
Psychology 101	4
Science or Math Requirement.	3-4
Social Science Requirement	4
Courses in Major and/or Minor Teaching Fields.	10-15
Course to satisfy fine and/or applied arts	3-4
Electives.	3
	48-55

SOPHOMORE YEAR	Qtr.Hrs.
English 270.	5
Political Science 120.	5
Science or Math Requirement.	4
Social Science Requirement	4
Courses in Major and/or Minor Teaching Fields.	25
Electives.	5
	48

JUNIOR YEAR	Qtr.Hrs.
Secondary Education 310	8
Secondary Education 340 or Methods in Special Fields	8
Course to satisfy fine and/or applied arts.	3-4
Courses in Major and/or Minor Teaching Fields	29-32
	48-52

SENIOR YEAR	Qtr.Hrs.
Secondary Education 392	16*
Courses in Major and/or Minor Teaching Fields	32-33
	48-49

*Students enrolled for 16 hours of student teaching will not be permitted to register for any other course.

APPENDIX J

NEWSPAPER ARTICLE FROM

THE COLLEGIAN, MAY, 1972

New curriculum outlined in Education

By Richard Smith
Education Writer

Increased knowledge of course objectives, more individualistic learning situations, greater continuity and integration in related courses, and the chance to better practically apply the knowledge later are some of the goals and reasons behind the initiation of new programs for preparing elementary and secondary education students, according to Dr. Hughes Moir, Department of Elementary and Early Childhood Education, and Dr. Richard Hersh, Department of Secondary Education.

Many course requirements have been altered in both departments to try "to come more in line with requirements of public schools" and to bring about more continuity in certain related course sequences.

Dr. Moir explained that the student should know, at the very beginning of the course, the objectives of the course, the criteria by which he will be evaluated, and the methods that will be used to determine when the student has achieved the level of performance sought.

With the objectives and procedures suggested to reach them clear to students the first day of class, they can more fully understand and learn the subject matter and realize how and why it is important to them.

Also having the course time remain constant and achievements of different students cover the entire grade range is "not a valid educational stance to take," said Dr. Moir.

Instead the achievement level should remain constant and the time should vary to accommodate the needs of all of the students. Some students may have the ability to complete a four quarter program in three quarters while others may need four all.

Courses previously treated individually are "melted together" and taught by a team of instructors working together to eliminate the situation where one instructor teaches his own particular course without knowing anything about or relating it to the next course in the series that the student must take, even though a relationship may vary well exist.

The student may have working under this same team of instructors for a considerable period of time which will allow for more personal contact and communication between them and give the instructor a chance to "structure to each student" the methods that should work best.

Instructors may "take into account the individual strengths and weaknesses of students" to help individualize their program. The team can be "more responsible and responsive" to the students through longer association with the same group. When groups move in and out regularly every quarter it is hard to do this.

Due to the new program concept, the instructor are "coming together in a new kind of group that has never existed before," said Dr. Moir.

This change will also attempt to "provide students with a greater opportunity to apply what they learn in a field setting that is very real and not just paper and pencil learning and testing," said Dr. Moir.

Study will be more "competency based" and "field centered" to cause students to become oriented to the actual teaching experience.

The new program "allows us to get kids out into the schools" and put "real work in the schools" in th program, said Dr. Hersh. To "Maximize real life teaching through simulation" is another part of the program.

"More independent work" and "Individualized instructing" is also needed, Dr. Hersh added.

The new methods will help to "free the program a little bit" in certain areas to the student's advantage.

APPENDIX K

SEARS SITE VISITOR REPORT #3

New York University

School of Education
Student Teaching Office

4 Washington Square Village, Suite 1M
New York, N.Y. 10012
Telephone: (212) 598-2865

June 13, 1972

Drs. Cass Gentry, Hughes Moyer and Richard Hersh
School of Education
University of Toledo
Toledo, Ohio 43606

Dear Gentlemen:

As you know my final site visit to the University was to accomplish two purposes: 1/ to discuss with you the final report and, 2/ to interview as many faculty as possible to ascertain whether the objectives stated in your proposal were accomplished.

When I left the three of you I had the feeling that the minor problems you, as the coordinators of the program were currently encountering with facilitating instructional teams in the completing of their modules for the September program, will be insignificant compared to what you can expect in the Fall as you operationalize your Performance Based Teacher Education (PBTE) program. BUT, if your current style of operation is any indication of effective administration, you will cope well.

In my rather hit-and-miss selection of staff for interviews and in watching an instructional team in actio. it was apparent that the staff had internalized, both cognitively and affectively, the philosophy and goals of the program, felt a strong bond with the objectives (having created them themselves), and had a strong desire to succeed. Despite a quality of desperation at the fact that they had publicly committed themselves to PBTE and to its eventual success every one I interviewed was willing to stand in front of other professionals and discuss the merits, the limitations of the program. No one laid blame on others for what had been accomplished. They all "owed-up" to their participation and decision-making concerning the direction of the undergarduate PBTE program.

Many statements were made about how the change in the teacher training program came about, their original fears and their current qualms and dissatisfactions. But in discussing these minor dissatisfactions they also talked about a change in professional working style. Griping had been channeled into doing something about their situation and this year of operation had given them an opportunity to test out new ways of behaving at the institution. It was apparent that reinforcement theory, as practised by you, was effective in permitting individuals to take a chance. Self-selection in working with groups also appeared to be an effective factor. All of the faculty appeared to be task or action oriented and I got the feeling that a cadre of "change agents" had been developed. The problem to be faced in the Fall is to keep these agents active, to reinforce the feeling that the staff directs its own destiny, and try to help people from getting discouraged if the program does not follow the exact guidelines planned this year.

NEW YORK UNIVERSITY
School of Education
Student Teaching Office
4 WASHINGTON SQUARE VILLAGE, SUITE 1M, NEW YORK, N.Y. 10012
AREA 212 598-2865

June 13, 1972

In connection with this last point my discussions with Deans Dickson and Saxe clearly indicated that they would do all in their power to insure the success of the program. Both Deans mentioned that it was the Sears money that had created the opportunity for the staff at the various retreats to 1/ define their problems, 2/ set priorities on the most important problems to seek solutions, 3/ set solutions, 4/ develop internal as well as external forces and mechanisms to work out these problems and solutions and 5/ to help others in the field reach the same level of dissatisfaction and want to actively seek to become involved in the changing of the teacher training program.

The faculty members all talked about their dissatisfaction with the old practices and now appeared quite clear and aware of the problems they would face. Having gone through the process of developing instructional modules and having these modules reviewed by the total staff also made them somewhat aware of their individual strengths and how what they do fits into a grand scheme. But here again, although there was some trepidation about what they had produced there was the knowledge that nothing was final;they could delete, revise and produce new modules as they assessed the effectiveness of the training program.

From what I heard from various faculty the new program is clearly better than what it replaced and is sufficiently popular with the faculty and others that its absence would be regarded as an indication of poor teacher education that is going on and that finally that in the long run will enhance the professional image of all participants. This last factor is not to be discounted. There was a very strong feeling expressed that the faculty of the University of Toledo had developed a model for teacher training that would enhance its image in the profession, as well as being extremely effective in the field.

As I reviewed my various communications with you, read all the materials produced, talked with staff it seems that for the final report in conjunction with the AASCUS guidelines react to the following questions: (This, in addition to, the points I made at our last meeting.)

1. What analysis did you go through in diagnosing the weaknesses of your previous program? What factors (historical, political, economic) helped the group to reach its state of dissatisfaction with the old program?

2. What values concerning teacher education pervade your new program?

3. Who became committed to doing the work? How did this committment come about? How did you organize this committment into developing the new program? (What's your style of operation?)

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June 13, 1972

4. What were your purposes for making the change? Any hidden agenda here?

5. What are the innovative elements of the new program? Who will engineer the installation of the program?

6. What were your strategies for getting the staff to come together to build the program? Who were the individuals you needed to touch-base with? Was your a "hard sell" or a "soft sell" approach? What were the sequence of steps for innovating?

7. What will be the rewards to the staff, the university students, the field personnel and ultimately the children in the schools?

8. What problems do you anticipate in the Fall and what solutions can you suggest?

It has been a great pleasure for me to work with you during this year and I hope you will keep me informed of the "trials and tribulations" of PBTE at Toledo.

See you in the Fall.

Cordially yours,

Howard Coron

Howard Coron

HC/hc

APPENDIX L

ABSTRACT OF ASSESSMENT PROPOSAL

University of Toledo

ABSTRACT

Title of Project: Implementation of an assessment plan for undergraduate teacher education program

Principle Investigator: George E. Dickson, Dean
College of Education
University of Toledo
Telephone AC (419) 31-5711 2488

Contracting Agency: The University of Toledo

Duration: September 1, 1972 - July 1, 1974

The College of Education, at The University of Toledo, has spent the last five years preparing itself for the implementation of a systematically developed program for preparing Elementary and Secondary Teachers.

We have employed the systems approach in determining objectives, criterion measures, and means of meeting the programs objectives. We have developed all the major components of the successful educational system excepting one. We have not yet resolved the problem of insuring that our system, on the basis of measurement data, will be revised.

We are convinced that for at least a highly significant part of our competency based program, some of the elements needed for evaluation and revision are already included in the system and will provide necessary (but not sufficient) data for revision. To illustrate, all modules produced for the new program must match objectives and criterion measures, with the means for accomplishing the objectives.

The value of this objectives-means-criterion match is that we can pinpoint modules or parts of modules that are ineffective. In the past this has been possible only in small programed instruction segments and with computer assisted instruction programs. We are doing this kind of a match on a scale that includes the complete professional program for training Elementary and Secondary Teachers. Data from the objectives-means-criterion match will complement additional data from general abilities tests, attitudinal measures, reviewer comments, and other measures.

It is clear to us that without the continuous collection and treatment of assessment data that the necessary information for revision will not be available. This means that the modules that we have developed will not be revised. Without revision, we would only be trading one orthodoxy for another.

Our problem then, is to implement an assessment component for our competency based system. To this end, we propose to set up an independent evaluation team. There is enough evidence that individuals responsible for

development have difficulty being objective when evaluating their program, to make us opt for an independent team.

The skills of this team will vary as the program progresses, but initially they should possess the following skills:

a. test construction and analysis

b. systems analysis

c. learning contingencies analysis

d. program development analysis

e. instructional materials and means analysis

The assessment team that we propose would not only be responsible for providing the instructional teams with continuous assessment data, but they would also be concerned with developing and revising the operational aspects (i.e. logistics, instrumentation) of the assessment management system.

University of Toledo

PROPOSAL TO IMPLEMENT AN ASSESSMENT PLAN FOR AN UNDERGRADUATE TEACHER EDUCATION PROGRAM

I. Introduction

Five years ago the College of Education, at The University of Toledo, in cooperation with a consortium of twelve state universities of Ohio, began to design a comprehensive elementary teacher education model program for six target populations, primarily focusing on elementary teachers and administrators. Since then the model has expanded to include the secondary teaching program, so that all of our education students will be taught through the Model Program. The Ohio Model, as it became known, clearly stated that all groups of educational personnel who were actively involved in the education, induction, and support of new teachers were to develop training or retraining programs which dealt realistically with the contexts of educational change. These contexts of change we identified as instructional organization, educational technology, contemporary learning-teaching process, societal factors, and research.

Our strategy was an attempt to insure that new and re-trained teachers would receive intelligent and sympathetic support in elementary schools, minimizing future risks of teacher failure and general educational unresponsiveness to change. The failure of previous attempts to change teacher education has occurred partially because of preoccupation with preservice educational populations rather than proper attention to all populations involved with schools.

The Ohio Model project resulted in other basic assumptions about Teacher Education which have been reported in Educational Comment/1969: Contexts for Teacher Education, pages 24-28. Fundamentally, The Ohio Model advocated a renunciation of the self-contained classroom concept in elementary education and the utilization of the multiunit school and team teaching approach (which has become a national U.S.O.E. thrust) developed by the Wisconsin Research & Development Center for Cognitive Learning. The Ohio Model puts a heavy emphasis on activities involving a continuous cooperative and coordinated effort with public schools. Such emphases demand a different approach for teaching teachers, than that traditionally accepted.

Paralleling model development, the College of Education, through its Center for Educational Research and Service (CERS) began inservice programs with public school systems in the Toledo metropolitan area to introduce and support educational innovations. One aspect of this activity was the development of multiunit schools. Ten of these schools in four school districts were operative as of September 1971. A major effort with this concept occurred in the heart of Toledo's inner-city and has been ongoing since 1967. An informative report of this effort will be found in Educational Comment/1971, The Ohio Model and the Multi-Unit School, pp. 33-68.

The need for reform in elementary and secondary education in the United States has been thoroughly documented in numerous addresses and publications, the latest of which has been Charles Silberman's book on Crisis in the Classroom: The Remaking of American Education. Severe problems exist in the areas of reading, the "irrelevance" of much that is offered by educational institutions to their clients, and the seeming inadequacy of present students to conceive and develop proper attitudes about "work" including occupational preparation and planning. The revolt of school patrons and taxpayers is almost a daily newspaper item. State legislatures and the national congress are increasingly concerned about putting new funds into the same old educational operational patterns. Educational discussions concern such concepts as educational accountability, performance-based education, criterion referenced programs, descriptive phrases which connote a demand for educational goal clarity and acceptable indicators as evidence of the realization of such goals. It is clear that schools have failed to provide systematic evidence on the relationship of program costs to program benefits and Silberman's concept of the "mindlessness of American education" captures very well the characteristics of a total system that is in a serious state of disrepair.

H. Del Shalock, in a working paper prepared for Task Force '72, has captured the essential shifts in education which must occur if we are, indeed, to address ourselves to meaningful reform in education. He speaks first of the shift from an experience-based to a performance-based mode of operation. Experience-based education simply provides experiences for students with little regard for what results from such experiences. We need performance-based educational programs where the outcomes expected to be derived from them are specified. Performance-based programs do not deny the significance of experience but they openly recognize and treat experience as a means rather than an end.

Second, Shalock advocates a shift from a primary focus upon knowledge and skill mastery to a primary focus on output. This essentially calls for reconsidering our heavy reliance upon knowledge as the primary basis for educating teachers and beginning to focus upon what teachers can do with what they know. "Doing" fundamentally means being able to perform specified teaching behaviors. This is increasingly being considered as a more reasonable basis for teacher certification.

Third, there should be a shift from an essentially data-free to an essentially data-dependent mode of operation in education. The call here is for more information about teachers and teaching and the use of it so that the instruction-learning experience can become more effective.

Fourth, there should be a shift from an essentially training function to a research development and training function. The proposition with this shift is that performance-based, output referenced and data-dependent training programs provide the best possible context within which to mount research and development efforts that will provide answers to ways of establishing more efficient educational systems.

Fifth, there should be a shift from an essentially impersonal instructor oriented learning environment to one that is personalized and student oriented. The plea is for a greater opportunity for individualization and personalization.

Sixth, there should be a shift from an essentially college or university centered program to a field centered program. This calls for the establishing of close and continuing contact on the part of universities and school systems in the operation of preservice and inservice educational activities.

A seventh and final shift calls for movement from a relatively narrow and essentially closed decision making base to one that is broad and essentially open. Decision-making is increasingly becoming less the prerogative of the single institution, but must rather be shared by all involved in the educational process.

We think we have some answers to what we want children to learn, how we want them to feel or believe, and what we expect in children's abilities. We have looked at the kind of school (multiunit school) which we think it will take to achieve our desired ends for learners. We know how to convert schools from a self-contained to a multiunit or differentiated staff type of organization, but changing the organization is insufficient. We must concentrate more explicitly on how to teach teachers to teach in a differentiated staff situation; how to individualize, personalize and modularize instruction; and how to manage and evaluate such effort. Hopefully, with the latter concern, we can develop the concept of "synthesis accountability" in terms of bringing together the measurement of the validity of public school programs and the validity of teacher education programs which would involve data concerning pupil outcomes and the concomittant data involving teacher education student outcomes.

The College of Education at The University of Toledo has had a considerable record of involvement with school systems and inservice education. Relationships are enjoyed with the Wisconsin R & D Center and I/D/E/A of the Kettering Foundation. Further, the college has been instrumental in helping the Ohio Department of Education organize for statewide multiunit school operation.

II. The Problem

To reiterate, the College of Education, at The University of Toledo, has spent the last five years preparing itself for the implementation of a systematically developed program for preparing elementary and secondary teachers. We have employed the "systems approach" in determining objectives, criterion measures, and means of meeting the program's objectives. We have developed all of the major components of a successful educational system, except one. We have not yet resolved the problem of ensuring that our system, on the basis of measurement data, will be revised.

Individuals involved in the development of a competency-based system, regardless of its size, are aware of the complex factors operating in such a system. The initial development of the modules that make up the instruction for our elementary and secondary teachers-to-be, have resulted in only approximations of ideal modules. As we begin our first year of implementation, we have imcomplete data concerning the effectiveness, efficiency, or the validity of the learning modules that make up our new competency-based teacher education program. If we do not develop and implement means for measuring the effects of our program, and of revising it, we can only expect that the program will devolve into isolated, poorly related parts, so typical of teacher-training programs. In fact, the major rationale for attempting a whole new educational system, depends on the possibility of continuous revision of that system.

At least three processes must be present for revision to consistently occur; (1) detection, (2) identification, and (3) response availability. For revision to take place, the disparity between an effectively operating system and a defectively operating system must be of such form and quantity to be detectable by the responsible group. Obviously, if the disparity cannot be detected, measurement cannot be taken for its correction. Apart from the necessity for the disparity to be detected, it must also be identified. Corrective action cannot be specific unless a given defect is successfully discriminated from other possible defects. Upon detection and identification of the effective-ineffective disparity, the responsible group must be allowed by managerial and resource conditions to make the correction. The remainder of this prospectus serves to describe a system for meeting the conditions required for the three processes to take place.

III. Methodology

We are convinced that, for at least a highly significant part of our competency-based program, the major elements needed for evaluation and revision, are already included in the system and will almost by definition provide the necessary data for revision. To illustrate, all modules produced for the new program must match objectives, and criterion measures, with the means for accomplishing the objectives. The objectives and the criteria for determining whether they have been met will remain relatively constant, while the selection of means for accomplishing the objectives will remain the purview of the individual professor teaching a module. He would of course match his means with a specific objective and criteria.

The value of this Objectives-Means-Criterion Match is that we can pin-point modules or parts of modules that are ineffective. In the past this has been possible only in small programmed instruction segments, and with a few computer assisted instruction programs (i.e., Suppes CAI Math program). We are doing this kind of match on a scale that includes the complete professional program for training elementary and secondary teachers.

The methodology for collecting data for revision of our competency-based program appears very simple - on the surface. To determine effectiveness of modules, or parts of modules, we could:

1) use the criterion instruments for each module to determine the items which are missed by a significant number of students.

2) these items could then be matched with the means used to accomplish the objectives that the items were measuring.

3) the means could then be examined for purposes of deciding why they are not effective, and could be modified for the next cycle of the module.

In addition to determining effectiveness of modules, data on the effeciency of modules or the parts of modules, could be collected by setting up some device to indicate the amount of time required for individual students to go through a module or a module segment, and to indicate the number of times students have had to repeat a module before mastering its behaviors. Other student feedback like, "indicating ambiguous phrases or terms" could be collected through the same instrument.

With the exception of entering behavior data, it would seem that a professor would have all of the data needed to make intelligent modifications in defective modules, and indeed, he would. Except that there appears to be a human factor which prevents final revision.

For some time, instructional designers, developers, implementers, and researchers have noted a curious phenomenon, individuals involved in developing and implementing programs have great difficulty objectively evaluating the effects of their work, regardless of how sophisticated or complete their evaluation instruments. They have even greater reluctance to analyze the evaluation data and apply it for revision purposes.

Dr. Henry Brickell, who in the early sixties, provided evidence supporting the inability of designers and developers to objectively evaluate their own products, recently reaffirmed his stand on this regard, adding that currently most federal funding agencies (ESEA - Titles 1 and 2, BEPD, etc.) require that evaluation of programs be carried out independently. While a minor reason for doing so is to keep developers and designers honest, the major resons are that developers and designers usually have neither the time nor the skills to carry on a successful evaluation, and moreover they unconsciously load the evaluation with factors biased toward their programs. This is especially true for formative assessment. Why this is true is open to speculation. We cannot hope to solve that particular human-factors problem now, important though it is, but we can set up a sub-system that will compensate for this phenomenon.

What we propose is to set up an independent evaluation team made up of individuals who are not directly involved with our Model Program. That is they would not be producing modules or teaching modules. Precise job descriptions are given in part V (Systems Requirements) of this proposal.

Figure 1 is a flowchart showing the Assessment and revision team's activities. We would expect that an important function of the Assessment Team, given their areas of expertise, would be to modify and refine this model under the harsh light of actual use. Further, many of the instruments implied in this flowchart either do not exist or have not been searched out. The team would be responsible for searching out extant instruments and modifying them for our use, as well as developing new assessment instruments. In an attempt to clarify the model, each of the processes depicted in the flowchart are briefly described below.

1. Collect prerequisite behavioral data. This function provides information for deciding whether a student has the appropriate behaviors for entering the module, and at what point he should enter. The posttests of prerequisite modules provide part of this data.

2. Collect Terminal and Enabling Behavior Data. Done primarily through objective test instruments. The enabling behavior data is collected to provide recycling information for those students unsuccessful in meeting terminal behaviors.

3. Implement Program Component. Students interact with the program for the purpose of learning the program behaviors.

4. Collect Posttest Data. This will be done with machine scoring answer sheets where objective test items are used, and with evaluation scale sheets where essay or constructed response are used.

5. Input data into computer. The assessment data will be placed in a computer for purposes of rearranging the data to focus on different measurement variables (i.e., time, sex, achievement, etc.).

6. Effectiveness Readout. The computer program will collate and compare items testing students success on each objective.

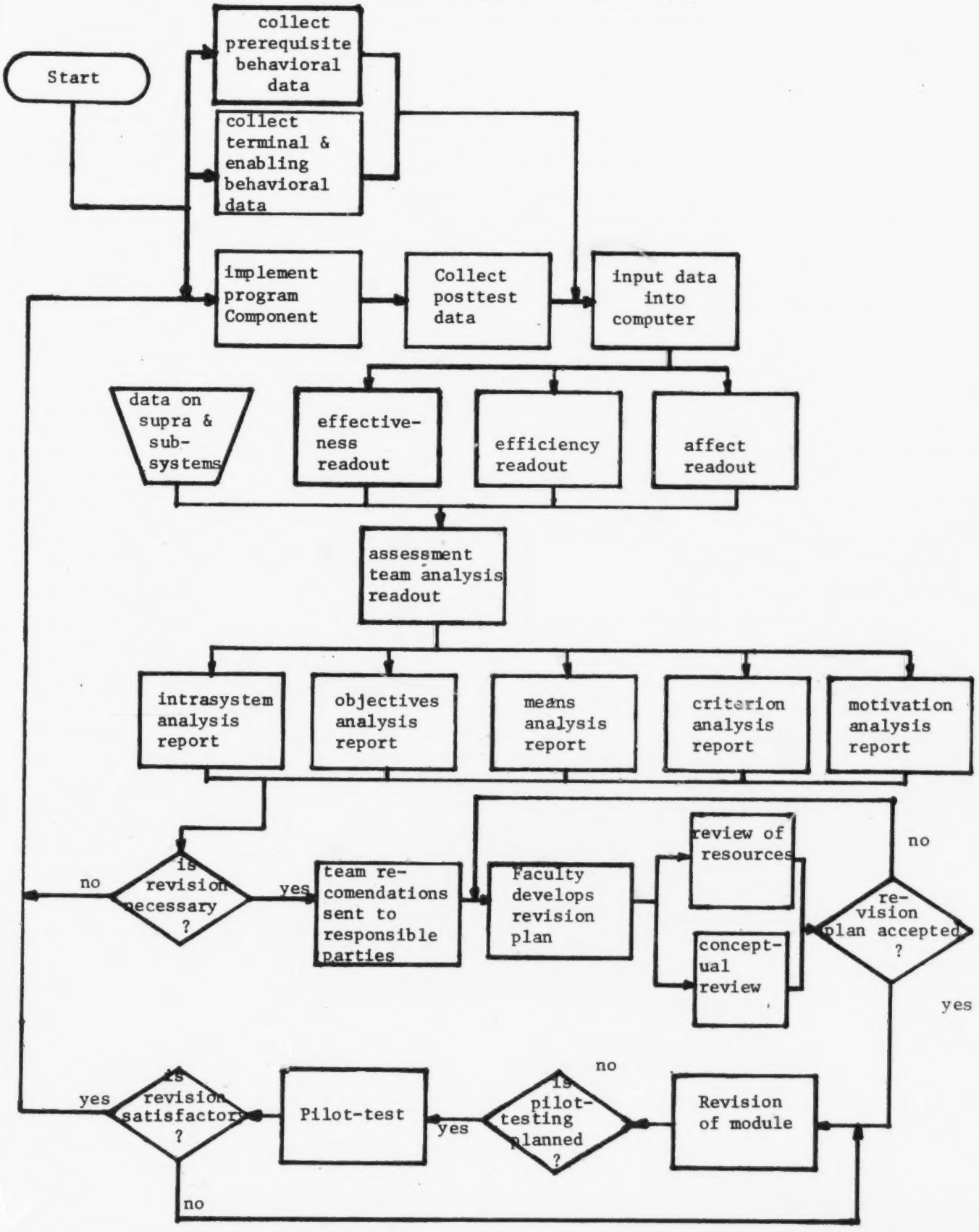
7. Efficiency Readout. The computer program will compare times for completing modules and parts of modules.

8. Affect Readout. The computer program will collate and compare affective responses on semantic differentials (part of posttest data).

9. Data on Supra and Subsystems. Sequence data, primarily.

10. Assessment Analysis of Readouts. Inspection of the data related to modules below minimum effectiveness and efficiency levels, to determine focus of defect.

Figure 1: A formative and Sumative Assessment and Revision



11. Intrasystem Analysis Report. Statement of how the module relates to other parts of the instructional system.

12. Objectives Analysis Report. Indicates need for refinement or resequencing of objectives for defective modules.

13. Means Analysis Report. Indicates which means or media need to be revised.

14. Criterion Analysis Report. Indicates detective items in terms of discrimination, ambiguity, etc.

15. Motivation Analysis Report. Indicates parts of module that students regard as tedious or uninteresting.

16. Recommendation for Revision sent to Division Director, Department Chairman, and Faculty Responsible for Module. Based on the Analysis Reports the team sends their recommendation for revision.

The Team's responsibility ends for this cycle. The rest of the flow chart represent faculty and administration decisions concerning revision.

17. Faculty Developes Revision Plan. Based on the report from the assessment team, a faculty member or members will propose a plan for revision that he will submit to his Department and Division.

18. Resource Review and Conceptual Review. The Division and Department are responsible for determining if resources are available to carry out the Proposed revision, and to determine if the revision is conceptually congruent with the rest of the program.

19. Revision of Module. This is a much abstracted process. If it were broken down it would include such factors as; released time for faculty, support staff, obtaining or fabricating instructional materials, etc.

20. Pilot-test Revised Module. This is done as much to work out process problems, as to determine effectiveness and efficiency.

We see our Assessment Team beginning with data collected by instruments characterized by Paulson in figure 2.[1] We assume that as we go into our full implementation year, the Assessment Team will add some instruments and delete other. However, we precieve that the final decision to add or delete measurement instruments must lie with the faculty. The Assessment Team is limited to making recommendations.

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[1]Casper F. Paulson. Cord National Research Training Manual. Teaching Research, Corrallis, Oregon, 1969, pp. IV - 1 through IV - 14.

The faculty will maintain control of both input and output of the assessment process. To this end, we plan to elect a committee from among our faculty members to whom the Assessment Team would go for permission to change, delete or add assessment procedures. The types of decisions this committee may make, and the kinds of information they must provide faculty, will be stated and agreed to by the faculty in a set of guidelines for the committee. Because of the dynamic nature of our instructional system, and its proposed assessment component, we expect a great deal of change, necessarily. Therefore we hasten to add that this committee is not designed to prevent change, but to maintain control of the process by involved faculty, and to ensure that communication channels remain open between the assessors and the assessed.

A second group would form an advisory committee that would represent the administrative interests of the College and the University. This monitoring group would consist of the Dean of the College of Education, and others that he would appoint on the basis of some administrative responsibility for the Elementary and Secondary Teaching Program.

Data Collection	
Measurement Points	Instruments
A. Point of Origin	1. Pre-tests 2. General Abilities 3. Prerequisite Behavior
B. Instructional Stimuli	1. Student Comments 2. Various Reviewer Comments
C. Process Indicators	1. Monitor Comments 2. Frame Responses Analysis
D. Learning Indicators	Terminal Frame Analysis
E. Diagnostic Indicators	Synthesis of Other Data
F. Criterion Indicators	Post-test

Figure 2: Measurement points and Instruments in an instructional assessment program.

To examine the Assessment Teams relationship to the faculty from a different perspective, consider the following criteria:

(1) All measurement data, including computer program manipulation of that data would be sent to the Team.

(2) The team would examine the measurement data, and would determine the effectiveness of the module(s) and write up their revision recommendations.

(3) The team would put the information into a report to faculty members or faculty teams responsible for the module. This report would indicate the particular defective module, and all pertinent data concerning it. As important, would be their report to faculty on successful modules and module clusters.

(4) The team would be restricted to criteria established by the faculty. As mentioned earlier, these would include; the objectives-means-criterion match, student comments, and computer manipulated data. This is important because such an independent evaluation team could be quite threatening to a college faculty. There is the fear that no independent team can be knowledgeable enough to assess fairly such a complex process. There is also the concern that external, or even hidden criteria may be used. Much of the threat should be reduced if faculty control the criteria for the assessment.

(5) The team would also be responsible for sending a copy of their report to the group responsible for monitoring the instructional system (Division Director or Department Chairmen), and to the faculty Committee to whom the Assessment Team reports.

(6) The faculty member, or members, responsible for modules requiring modification would be required to formally inform the monitoring group, how the modules would be modified before the module was recycled. A copy of the revised module would then be sent to both the monitoring group and the faculty committee prior to the module recycling.

The highly specified modules, resulting from their systematic development, provides a rationale for released time for professors to revise defective modules. In the past, the ambiguous nature of individual lesson plans and procedures made it extremely difficult for one professor to take over another's instructional responsibilities, but given the specific objectives-means-criteria match, required for each of the modules, it should be relatively easy for a professor, with similar competencies to take over, temporarily. In fact, our preliminary sequencing of the modules makes it obvious that professors will rotate responsibility for a given group of students, because of the new order of modules. The placement of modules for logical and prerequisite reasons rather than for administrative ones means that one professor may step aside temporarily for another who has a special expertise relevant at that time. For example, students finishing modules on writing and categorizing behavioral objectives with one professor might logically go to another for the study of learning conditions (ala Gagne) most appropriate for meeting the objectives. In turn that professor might make way for a third who is competent in selection and utilization of instructional media relevant to the objectives and learning conditions dealt with by the other modules. This condition, coupled with the college's plan for reallocating resources to include released time for revision purposes (faculty load reduction), provides another necessary factor towards ensuring that

continuous revision can take place. Finally, the kind of cooperation and interaction pointed out above would be further encouraged by the formation of interdisciplinary teams who are responsible for given groups of students and clusters of modules. Five man instructional teams representing the context areas, mentioned earlier, have already been formed.

V. System Requirements

A. This assessment team would be differentiated to the extent that they would possess among them, skills in:

1. systems analysis
2. program development analysis
3. learning contingency analysis
4. print and non-print media analysis
5. test construction and analysis

B. Job descriptions for Assessment team members would be:

1. Systems Analyst: This person would also serve as the chairman of the team. He would be trained in the major evaluation models. He would be responsible for looking at how modules fit into the overall program.

2. Program Development Specialist: Would be able to develop and modify existing computer programs for the inclusion and manipulation of assessment data. It is anticipated that his major tasks would be completed during the first year, and that thereafter such services could be handled on a consultant basis.

3. Learning specialist: his skills would be those of an educational pychologist. He would be particularly skilled in applying models for evaluating and determining approximate conditions of learning (Gagne Model, etc.). He would be able to categorize objectives by type of learning and by taxonomic level.

4. Instructional Materials Specialist: This person will be skilled in; non-print materials analysis, and knowledgable in sources of alternative print and non-print means.

5. Criterion Instrument analyst: This person would have skills in test construction, and in determining appropriateness of particular testing techniques for measuring instruction.

C. A project assistant would be required to support the assessment team in the collection of data, and other logistical services.

D. The team would require a secretary to handle typing and management of the assessment data.

E. Expendable office materials and evaluation forms for this group.

F. The setting up of data collection instruments that are complementary to computer input requirements.

G. The development or modification of a computer program for handling the data.

H. Computer time for running the evaluation and revision data.

V. External support

The College of Education, like many instituions at this time is operating under severe budgetary restrictions. Although we have been able to reallocate many of the resources in our present budget for module and system development purposes, the resources are too scanty to support all essential aspects of the model to the necessary minimum requirements. But external support for the assessment component would enable us to implement the program as a whole and ensure its continued revision.

The assessment component financial need would cover three Phases:

Phase I: Complete Budgetary support of the assessment component for the first two years, 1972-1974.

Phase II: Partial funding of the assessment Component for the following eighteen months.

Phase III: The college would assume all funding responsibility for the assessment component.

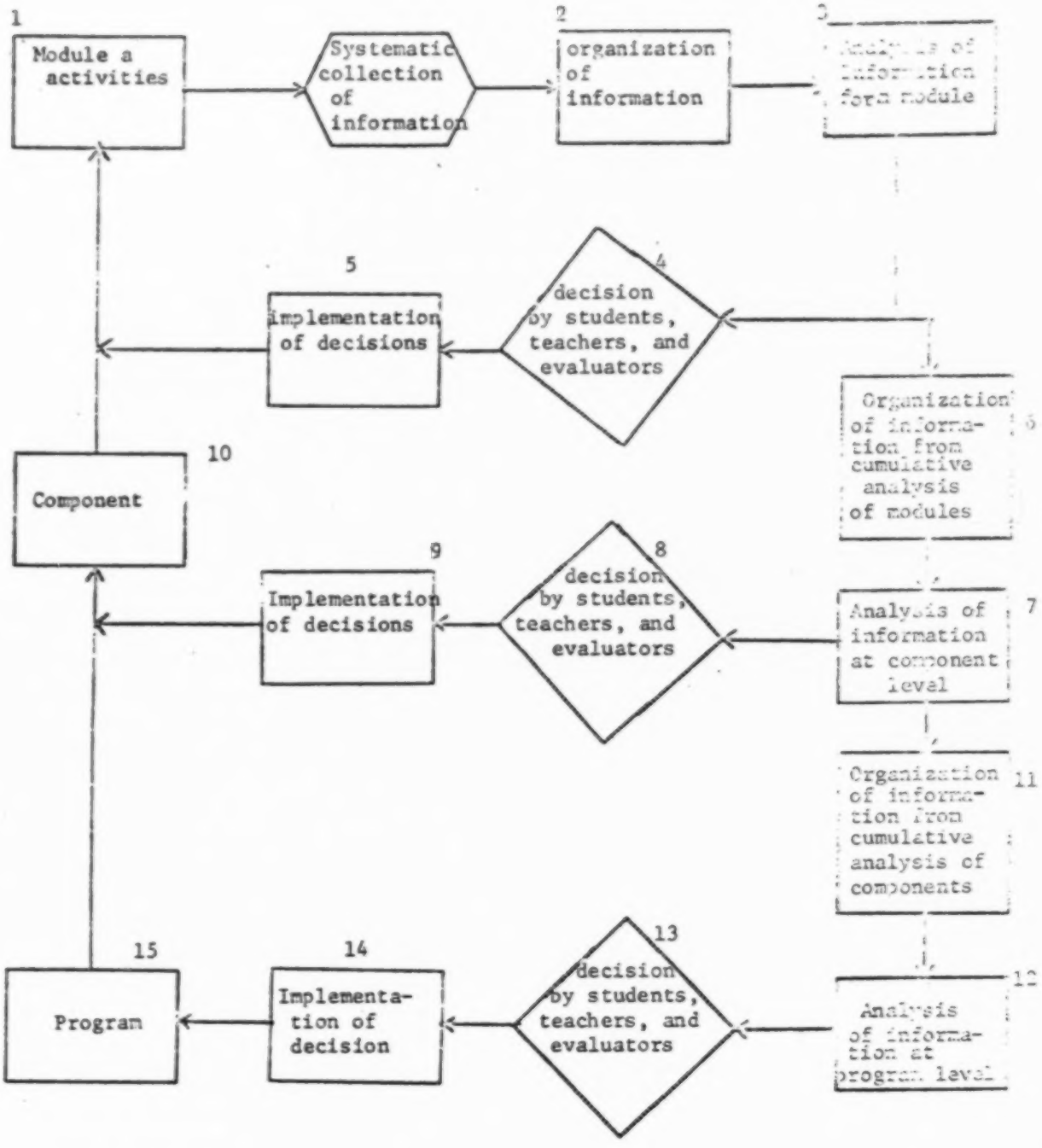
VI. Summary

While the focus of this proposal is at the module level of revision, such procedures also provides a model for component, and for program revision.

Figure 3 attempts to show the relationship between module, component, and program revision. Initally, our team would be analyzing data concerning steps 1 - 5, only over modules. But their responsibility would expand to include steps 6 - 15, which assesses components, and the program as a whole. Indeed, the purpose of this proposal is to form a basis for analysis and modification at all levels within a professional program for elementary and secondary teachers.

We recognize that the final determination of whether our elementary and secondary teacher program is successful or not, depends, upon the effects that our program graduates have upon their students. To trace an effect of our program from the college classroom to the elementary or secondary classroom, and to student behavior in society has, in the past, been nearly impossible. But our college, because of its close relationship with the public schools through the multiunit school concept

Figure 3: Feedback Control Loop: Evaluation Support System



(page 1), provides us with the structure that will allow us to begin to study such a longitudinal effect. Many of our graduates find positions in the immediate area, which when coupled with our College's easy access to the schools, and the assessment data collected on those students in both class and field experiences, encourage us to begin a longitudinal assessment program. We recognize the complexity of such a task, but we intend to attack this task, too, from the view of successive approximations. While such longitudinal assessment goes beyond the boundaries of this proposal, the present design of our assessment component, and its future development is shaped by the expectation of such a future longitudinal assessment plan.

We propose to implement this evaluation and revision plan in the Fall of 1972. We see this component with its independent assessment team as becoming and remaining absolutely necessary, if our modularized, competency-based program is to be viable.

VII. BUDGET OR PROJECT COST ESTIMATES FOR FIRST YEAR, 1972-73

Project Director: Castelle G. Gentry Institution or Agency: University of Toledo

Proposed Duration: 12 months Starting Date: 9/1/72 Ending Date: 9/1/73

A.	DIRECT COSTS	
	Personnel Salaries	40,700
	Employee benefits	5,832
	Travel	1,000
	Supplies and Materials	3,000
	Communications	200
	Services	
	Duplicating and Reproduction	2,500
	computer	5,000
	Final Report Production	900
	Equipment	2,000
	Computer Program Costs	3,000
	Development of Data Collection Instruments	5,000
	Subtotal Direct Costs	69,132
B.	INDIRECT COSTS 45.65% (40,700)	18,580
C.	TOTAL COSTS	87,712

JUSTIFICATION FOR BUDGET FIGURES

Personnel

a.	Director	
	50% Salary (18,000/9 mos.) for 12 mons. 2,000 x 12 ÷ .50 =	12,000
b.	Staff Member 1	
	25% Salary (13,000/9 mons.) x 12 months=	4,330
c.	Staff Member 2	
	25% Salary (12,600/9 mons.) x 12 months=	4,200
d.	Staff Member 3	
	25% Salary (12,500/9 mons.) x 12 months	4,170
e.	Staff Member 4	
	25% Salary (12,000/9 mons.) x 12 months	4,000
f.	Project Assistant	
	100% (4,350/9 mons.) x 12 months=	5,800
g.	Consultant, computer programming	
	7 days @ 100/day	700
h.	Consultant, Evaluation	
	7 days @ 100/day	700
i.	Typist	
	100% (4,800/ 9 mons.) X 12 months=	4,800
	Total Salaries	40,700

Employee Benefits

a.	Director		1,924.36
	Retirement 12.9% (12,000)=	1,548.00	
	Hospitalization 27.56 (12) x .50	165.36	
	Group Insurance 12.05 (12) x .50	122.30	
	Workmen's Compensation .16% (12,000)	19.20	
	Unemployment Compensation .6	68.00	

b.	Staff Member 1		718.21
	Retirement 12.9% (4,330)	558.70	
	Hospitalization 27.56 (12) x .25	82.68	
	Group Insurance 12.05 (12) x .25	36.15	
	Workmen's Compensation .16% (4,330)	6.93	
	Unemployment Compensation ____	33.75	
c.	Staff Member 2		701.10
	Retirement 12.9% (4,200)	541.80	
	Hospitalization 27.56 (12) x .25	82.68	
	Group Insurance 12.05 (12) x .25	36.15	
	Workmen's Compensation .16% (4,200)	6.72	
	Unemployment Compensation ____	33.75	
d.	Staff Member 3		697.21
	Retirement 12.9% (4,170)	537.93	
	Hospitalization 27.56 (12) x .25	82.68	
	Group Insurance 12.05 (12) x .25	36.15	
	Workmen's Compensation .16% (4,170)	6.67	
	Unemployment Compensation ____	33.75	
e.	Staff Member 4		675.04
	Retirement 12.9% (4,000)	516.00	
	Hospitalization 27.56 (12) x .25	82.68	
	Group Insurance 12.05 (12) x .25	36.15	
	Workmen's Compensation .16% (4,000)	6.46	
	Unemployment Compensation ____	33.75	
f.	Consultant, Computer programming	00.00	
	2 external - no benefits		
g.	Consultant, Evaluation	00.00	
	2 external - no benefits		
h.	Typist		1,116.02
	Retirement 10% (4,800)	480.00	
	Hospitalization 31.06 (12)	372.72	
	Group Insurance 9.41 (12)	112.92	
	Workmen's Compensation .16% (4,800)	7.68	
	Unemployment Compensation	135.00	
	Total Benefits		5,832.44

Budget 1972-73 4

Travel		
10,000 miles @ 10/mile		1,000.00
Supplies and Materials		3,000.00
Office supplies, paper, stationary, stencils, envelops, general office supplies		
Communications		200.00
Postage	50.00	
Telephone	150.00	
Services		7,580.00
Duplicating and Reproduction	2,588.00	
Computer Time	5,000.00	
Final Report		900.00
Equipment		2,000.00

VIII. BUDGET OR PROJECT COST ESTIMATES FOR SECOND YEAR, 1973-74

Project Director: Castelle G. Gentry Institution or Agency: University of Toledo

Proposed Duration: 12 months Starting date: 9/1/73 Ending date: 9/1/74

A.	Direct Costs	
	Personnel Salaries	37,826
	Employee benefits	5,487
	Travel	1,000
	Supplies	3,000
	Communications	200
	Services	
	Duplicating and Reproduction	2,500
	Computer	5,000
	Final Report Production	900
	Equipment	1,000
	Computer Program Costs	1,000
	Development of Data Collection Instruments	2,000
	Subtotal Direct Costs	59,913
B.	Indirect Costs 45.65% (37,826)	17,268
C.	Total Costs	77,181

JUSTIFICATION FOR BUDGET FIGURES

Personnel

a. Director

50% salary (18,600/9 mons.) for 12 mons. 3000 x 12 ÷ .50= 12,396

b. Staff Member 1

25% salary (13,500/9 mons.) x 12 months= 4,500

c. Staff Member 2

25% Salary (13,000/9 mons.) x 12 months 4,330

d. Staff Member 3

25% Salary (12,600/9 mons.) x 12 months 4,200

e. Project Assistant

100% (4,500/9 mons.) x 12 months 6,000

f. Consultant, computer programming

7 days @ 100/day 700

g. Consultant, Evaluation

7 days @ 100/day 700

h. Typist

100% (5,000/12 mons.) x 12 months 5,000

Total Salaries 37,826

Employee Benefits

a. Director 1,979.13

Retirement 12.9% (12,396)=	1,599.00
Hospitalization 27.56 (12) x .50	170.00
Group Insurance 12.05 (12) x .50	122.30
Workmen's Compensation .16% (12,396)	19.83
Unemployment Compensation ____	68.00

b.	Staff Member 1		744.50
	Retirement 12.9% (4,500)	580.50	
	Hospitalization 27.56 (12) x .25	87.00	
	Group Insurance 12.05 (12) x .25	36.15	
	Workmen's Compensation .16% (4,500)	7.20	
	Unemployment Compensation	33.75	
c.	Staff Member 2		722.40
	Retirement 12.9% (4,330)	558.57	
	Hospitalization 27.56 (12) x .25	87.00	
	Group Insurance 12.05 (12) x .25	36.15	
	Workmen's Compensation .16% (4,330)	6.93	
	Unemployment Compensation	33.75	
d.	Staff Member 3		705.42
	Retirement 12.9% (4,200)	541.80	
	Hospitalization 27.56 (12) x .25	87.00	
	Group Insurance 12.05 (12) x .25	36.15	
	Workmen's Compensation .16% (4,200)	6.72	
	Unemployment Compensation	33.75	
e.	Consultant, Computer programming 2 external - no benefits		00.00
f.	Consultant, Evaluation 2 external - no benefits		00.00
h.	Typist		1,136.00
	Retirement 10% (5,000)	500.00	
	Hospitalization 31.06 (12)	378.00	
	Group Insurance 9.41 (12)	115.00	
	Workmen's Compensation .16% (5,000)	8.00	
	Unemployment Compensation	135.00	
	Total Benefits		5,487.45

Travel		
10,000 miles @ 10/mile		1,000.00
Supplies and Materials		3,000.00
Office supplies, paper, stationary, stencils, envelops, general office supplies		
Communications		200.00
Postage	50.00	
Telephone	150.00	
Services		7,580.00
Duplicating and Reproduction	2,588.00	
Computer Time	5,000.00	
Final Report		900.00
Equipment		1,000.00

APPENDIX M

SAMPLE INSTRUCTIONAL MODULES

DEPARTMENT/CONTEXT: Secondary Education

Subject: Social Studies Education

Title: The teaching of concepts (UN and GR)

Prerequisite: Learning theory modules on concept formation

Rationale: In the complex world of changing reality it is impossible to "know all the facts" before one acts. Education, is an on-going process which supposedly prepares us for continuous learning or the TRANSFER of what we already know to new situations with which we are unfamiliar. Concept teaching is important if we wish to prepare our students for future learning.

While many practicing teachers believe that knowing facts is a sufficient condition for using facts, the research and reality of our own lives denies this assumption. Rather, it is imperative that one who teachers understands that there is a necessary relationship between facts and concepts- that we must teach both. One cannot do the latter unless he understands that relationship. This module requires that you demonstrate understanding of the relationship between facts and concepts and that you can apply-USE this understanding in planning for teaching.

Behavioral Objectives: 1. Given a list of statements the student will correctly identify which statements are U-N concepts, G-R concepts, Cue concepts, or Value concepts. 80% accuracy is required.

2. Given three case studies in written form, the student will write a Cue concept and a G-R concept which are common to all three of the case studies. 100% accuracy

3. Utilizing the G-R concept developed above rewrite the concept in a form that would allow the concept to apply to situations other than those in the particular indian village in the case studies. Two U-N concepts must be included to support the G-R concept. 100% accuracy

Materials: NO G.O.D.s in the CLASSROOM: Inquiry Into Inquiry
Inquiry and Secondary Social Studies

Directions: Following are a list of statements. In the blank space before each statement write U-N if a U-N concept, G-R if a G-R concept, V if it is a value concept and C if it is a Cue Concept.

1._____ Capital Punishment deters homocide.

2. _____ Man can use his technology to modify his environment.

3._____ Long haired people are not patriotic.

4. _____ Columbus discovered America in 1492

5. _____ The first President of the United States was George Washington.

6._____ Bachelors should not pay school taxes.

7._____ Women are mentally inferior to men.

8._____ Colored people are lazy and no good.

9._____ Black people dance better than white people.

10._____ In the United States there are 120 doctors per 100,000 inhabitants.

11._____ Nationalism

12. _____ Boston is on the Charles River.

13. _____ New York City is the worst city in the world.

14. _____ Pollution

15. _____ Role

16._____ In most societies the role of the mother is subservient to the husband.

17. _____ Compromise

18._____ The "Great Compromise" was the most important compromise in the history of the United States

19. _____ Change is a neutral process; it may progress or decline.

20._____ Social Change

21. _____ Desert economies are always agricultural.

22. _____ Saudi Arabia, according to the 1972 United Nations yearbook, ranks first in the production of oil in the middle east.

23. _____ Culture

24. _____ Increased travel and communication networks have produced international cultural changes.

25. _____ America has the best culture in the world.

26. _____ Authority

27. _____ The President is the chief executive of the country in the United States.

28. _____ The 1960 election was won by John Kennedy by less than 1%.

29. _____ Republican Presidents have been bad Presidents.

30. _____ Where man lives geographically determines how he makes his living.

Below are three case studies. Read each of the case studies first. Having read the case studies perform the following tasks:

1. Write a Cue concept and a G-R concept which are common to all three of the case studies.

Cue Concept_____

G-R concept_____

_____

2. Write a new G-R concept which apply to the three given case studies and to other situations of cultural change which you have not seen here. Write two U-N concepts supporting the G-R concept.

G-R concept_____

_____

Supporting U-N concepts a) _____

b) _____

Submit to instructor for evaluation

Case Study #1

An extension worker was teaching ways to "mid-wife" in a small village. She informed the mid-wives in one class that they should not cut the umbilical cord with an unsterilized sickle. The worker explained that unless the sickle were sterilized, there could be a disease called tetanus. The villagers attributed tetanus to an invisible flying insect call jam. If jam touched a baby, the baby would die. The worker did discard the villagers' notions about the tetanus and Jam. She told the villagers that Jam might touch the sickle or other cutting instruments used. Since Jam was invisible and no person could see the flying insect when it touched things, everything used for cutting should be put in boiling water before use. This way, Jam's danger would be eliminated. The worker believed that the mid-wives would not sterilize the instruments unless they saw the act related to Jam. If they sterilized the instruments, eventually tetanus would not be a danger. And, the need for the particular Jam belief would disappear.

Case Study #2

Small-pox vaccination was to be introduced to the villagers. The villagers believed that small-pox was caused by a disease goddess. Small-pox epide ics had grown and caused much fear. The disease goddess was not easily placated. Despite offering made by the villagers, the disease persisted. A few villagers decided to risk the vaccination approach. The villagers watched with concern the children who had received the vaccination. They knew that pox marks and fever were signs that the goddess was residing in the body. Ceremonies would be performed in her honor. The vaccinated children became feverish. The goddess was in the body! Ceremonies were performed, the fever died down, and thus the goddess had left -- never to bother the child again. The villagers were impressed. Had the worker simply told villagers that small-pox was caused by a virus, the villagers would have thought that such blasphemy would only bring the wrath of the goddess.

Case Study #3*

Villagers used to use the fields as latrines. Two extension workers wanted to build indoor (covered) borehole latrines as a move to improve sanitation. The women in the village agreed that there were good reasons for building such latrines. But, there was one major reason why the use of the fields should NOT be changed. It seemed that the daily trips to the fields allowed a time for the women to meet and to chat with friends whom they otherwise had little occasion to meet. Young women of high caste who were strictly confined to their homes during the daylight hours disapproved of the indoor latrines project. To build indoor latrines would be to challenge the custom of parda (seclusion of women) because there would then be need to provide other means for women to socialize with one another. The custom could not be interfered with. Thus, indoor latrines failed to get off the

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*Source: Mildred Luchinsky, "Problems of Culture Change in the Indian Village," Human Organization, Spring, 1963.

University of Toledo

DEMT - Module 3

1. Department/Context: Educational Media and Technology/Educational Technology

2. Subject/Topic: Programmed Instruction/Measurable Behavioral Objectives

3. Title: Behavioral Objectives

4. Prerequisites: None

5. Objectives:

   A. General: To be able to define, defend, recognize, and write behavioral objectives

   B. Terminal Behavioral Objectives:

      1. Given a random list of goals and behavioral objectives, to correctly differentiate between an educational goal and a behavioral objective in terms of the relative precision with which each is stated, with less than 10% error.

      2. Given a list of statements, to correctly label each statement as either an educational goal or a behavioral objective, without error.

      3. Given several statements, to select the statement that best describes the purpose of writing behavioral objectives, without error.

      4. Given several statements, to select the statements that best describes the terms used in stating affective objectives, without error.

      5. Given a list of activities indicative of a desired internal state, to discriminate between those that would be appropriate in any instructional situation and those that might be inappropriate in some situations, with less than 10% error.

      6. Given a list of statements, to identify each as a psychamotor objective, a cognitive objective, or an affective objective, without error.

      7. Given a randomized list of terms, to identify the terms that refer to objectives in the cognitive domain, with less than 10% error.

8. To state the three main characteristics of a behavioral objective from memory, and give a brief explanation of each one, without error.

9. Given a list of objectives, to be able to identify the behavioral terms, the conditions, and the standards, with less than 10% error.

10. Given a list of objectives, to discriminate between those that are adequate and those that are inadequate. In terms of performance, conditions, and standards, with 90% accuracy.

11. Given a list of objectives, rewrite those that are not stated in behavioral terms, including statements on performance, conditions, and standards, so that they meet Mager's criteria, without error.

12. Given a list of ten instructional objectives, to underline the observable and measurable terms and will classify each objective as motor performance (MP), verbal (V) or discrimination (D), without error.

13. Given a list of performance requirements, to classify each as either MP, V, D, or a combination of these, without error.

14. Go describe the steps in the process for breaking down those objectives that appear to be too large and complex or to consist of many kinds of activities. (should include decision role on when to break objectives down farther, and the process items).

15. Given a randomized list of interim and Subobjectives, to correctly check-off each interim objective, without error.

16. Given an instructional objective, to select the subobjectives that are critical for completion of the terminal performance requirements, without error.

17. Given 5 explanations describing why instructional technologists think that there is value in giving objectives to the student, and to correctly select the one (s) agreed on by instructional Technologists without error.

18. Given 5 brief statements describing why instructional technologists feel that objectives are necessary and valuable for the teacher, to select the one (s) agreed upon by instructional technologists.

19. Given a randomly ordered set of objectives, to correctly sequence the objectives into a behavioral hierarchy with less than 10% error.

20. Given a complex goal or general objectives to generate a behavioral hierarchy, including terminal and enabling objectives, without error.

V. Treatment:

A. Obtain pretest for this Module and complete.

B. Have pretest scored by lab assistant who will direct you to the unit or units you will be required to complete.

C. Obtain audio tape and slide sets for the particular unit you are going to study.

D. Read the objectives for the unit you are about to study.

E. View the appropriate slide/tape presentation and complete the response sheet for that unit.

F. Return slide/tape materials to the lab assistants.

G. When you have completed all required units for Module 6, obtain the evaluation for this module and complete.

H. Dependent upon the results of your evaluation you will be directed to your next assignment.

M - 3 Evaluation

Behavioral Objectives

Objective #1

1. An "objective," as it has been defined for the purposes of writing behavioral objectives, denotes:
   a. A goal that a teacher intends students to accomplish
   b. A desired goal for students to accomplish
   c. A goal for teachers to accomplish in their teaching methods
   d. A goal teachers would like to accomplish with their students

2. Generally, the most valid indications of student behavior that are related to a behavioral objective are those which:
   a. Reflect the objective indirectly
   b. Foster democratic ideals
   c. Allow the student to express himself
   d. Are linked directly with the objective

3. The following verbs might be used in writing behavioral objectives concerning the testing of geography. Which verb would require the least clarification in a behavioral objective?
   a. Understand
   b. Draw
   c. Locate
   d. Identify

4. The following verbs might be used in writing a behavioral objective for teaching high school English. Which verb would require the least clarification of a behavioral objective?
   a. Write
   b. Appreciate
   c. Illustrate
   d. Summarize

Objective #2

Given below are two characteristics of a statement of instructional objectives.

A. Identifies the behavior to be demonstrated by the student.

B. Indicates a standard or criterion of acceptable performance.

Are each of these characteristics peresent in each of the objectives below? For each objective below, check whether each of these characteristics is present.

	1	2
5. The student must be able to understand the theory of evolution. Evidence of understanding will be obtained from a written essay on evolution.	____	____

		1	2
6.	The student is to be able to complete a 100-item multiple-choice examination on the subject of marine biology. The lower limit of acceptable performance will be 85 items answered correctly within an examination period of 90 minutes.	____	____
7.	The student must be able to correctly name each item depicted by each of a series of 20 blueprints.	____	____
8.	To demonstrate his ability to read an assembly blueprint, the student must be able to make the item depicted by the blueprint given him at the time of examination. Student will be allowed the use of all tools in the shop.	____	____
9.	During the final examination, and without reference, the student must be able to write a description of the steps involved in making a blueprint.	____	____
10.	The student is to be able to draw his service revolver and fire five rounds (shots) from the hip within a period of three seconds. At 25 yeards all round must hit the standard sihouette target; at 50 yards he must hit with at least two of his five rounds.	____	____
11.	The student must know well the five cardinal rules of homicide investigation.	____	____
12.	The student must be able to fill out a standard accident report.	____	____
13.	The student must be able to write a coherent essay on the subject "How To Write Objectives for a Course in Law Appreciation." Student may use all references noted during the course, as well as class notes. Student must write his essay on paper provided by the examiner.	____	____
14.	Beside each of the following psychological principles, the student must be able to write the name of the authors of experiments on which the principle is based (list of principles appended).	____	____
15.	Given a list of objectives, the learner should be able to evaluate each.	____	____
16.	To list the important characteristics of branching and linear self-instructional programs.	____	____
17.	The student is to be able to name and give an example of each of six programming techniques useful for eliciting a correct response. To be considered correct, items listed by the student must appear on the handout entitled "Programming Techniques" issued by the instructor during the course.	____	____

18. To develop logical approaches in the solution of personnel problems. _____ _____

Objective #3

19. From the following statements, select the best rationale for writing behavioral objectives
    a. Makes clear what the teacher is to do
    b. Makes clear what various parts of the instruction should cost
    c. Clearly specifies student behavioral change
    d. Aids in selecting appropriate learning experiences

Objective #4

See if you can correctly match the following items:

20. Receive	E. Compliance or obedience
21. Respond	R. internalization of values
22. Value	N. action consistent with values
23. Organization	L. to be aware
24. Characterization	A. belief and worth

in the following exercise try to recall the five appropriate terms for the affective variables, Write on the provided space to the left of each item the correct term for the affective behavior.

25. The teacher enrolled in a Philosophy of Education course will develop a characterization of a social system in education which will be reflected in his continual work toward the improvement of instruction in his school district as measured by instructor observation.

26. Teachers using Introductory Algebra course materials will develop a positive interest toward the teaching of mathematics as measured by their responses to an attitude inventory.

27. The student enrolled in music education will receive an awareness of different types of music as determined by his ability to rank these types of music in order of their presentation in class.

28. The teacher enrolled in an in-service education program on the teaching of mathematics will develop an organization of a value system as measured by the Edward's Personal Preference Schedule.

29. The teacher enrolled in a teaching methods course will develop a value for a certain teaching technique as measured by his ability, without being asked to discuss the factors which makes it a good method for him.

Objective #5

No Criterion items.

Objective #6

Identify the appropriate taxonomy category for each of the objectives below write the category names in the blanks provided.

30. _____ The student will be able to write an essay emphasing the three types of paragraph organization given in class.

31. _____ Given the names of several composers and the names of several symphonies covered in class the student will be able to match them correctly on a test.

32. _____ The student will be able to identify the major parts of speech in several unfamiliar sentences.

33. _____ The student will identify the major positive and negative features of unfamiliar political systems according to the critieria presented in class.

34. _____ Given unfamiliar statistical data in paragraph form the student will be able to present the information in graphic form.

35. _____ The student will be able to design a building according to unfamiliar specifications and restrictions.

On the following test the student must correctly identify the following by domain and level. To successfully complete the examination the student must have no errors in classification of domain and must answer at least nine of the level items correctly.

Check (a) if domain adequate and/or (b) if level adequate

36. a. _____ Immigrants tend to settle in slum areas closest to business areas. Where are their decendents most likely to be found.
    b. _____

37. a. _____ On a trip to a museum a student exclaims "How lovely!"
    b. _____

38. a. _____ State if you agree, disagree, or are uncertain. Pupils of different races should not dance with each other.
    b. _____

39. a. _____ How could the greatest damages be avoided in bringing about uniformity of divorce laws.
    b. _____

40. a. _____ Ability to recognize what particulars are relevant to the validity of a judgement.
    b. _____

41. a. _____ The student will read at sight a given musical score.
    b. _____

42. a. _____ Listen to music with some discrimination as to mood and meaning.
    b. _____

43. a. _____ Begins to form judgments as to major directions in which American society should move.
    b. _____

44. a. _____ The student will state the life cycle of the housefly.
    b. _____

45. a. _____ The student will be able to make extemporaneous on a number of subjects.
    b. _____

46. a. _____ The student will be able to acknowledge that there is more than one point of view.
    b. _____

In the statements below, on the spaces provided, mark tha appropriate domain: Cognitive Domain, Affective Domain, or Psychomotor Domain.
(1) Cognitive Domain, (2) Affective Domain, (3) Psychomotor Domain.

_____47. A pupil is provided with a word problem in math and is able to correctly apply the formula and solve the problem.

_____48. A pupil develops the physical energy necessary to do cursive writing neatly and correctly.

_____49. A pupil may demonstrate an interest in music by his response in taking an active role in music activities.

_____50. A pupil demonstrates his knowledge of historical dates related to certain events.

_____51. A pupil may show improvement in shooting free throws on a basketball court by frequency of practice during a set period of time.

_____52. A pupil responds with a positive attitude toward reading as demonstrated by his eagerness to respond to reading activities.

In the following exercise, match the five appropriate terms for the affective variables. A- Valuing, B- Responding, C- Characterization, D- Receiving, E- Organization.

_____59. The teacher enrolled in a Philosophy of Education course will develop a characterization of a social system in education which will be reflected in his continual work toward the improvement of instruction in his school district, as measured by instructor observation.

_____60. Teachers using Introductory Algebra course materials will develop a positive interest toward the teaching of mathematics as measured by their responses to an attitude inventory.

_____61. The student enrolled in music education will receive an awareness of different types of music as determined by his ability to rank these types of music in order of their presentation in class.

_____62. The teacher enrolled in an in-service education program on the teaching of mathematics will develop an organization of a value system as measured by the Edward's Personal preference Schedule.

_____63. The teacher enrolled in a teaching methods course will develop a value for a certain teaching technique as measured by his ability, without being asked, to discuss the factors which makes it good method for him.

Classify each statement below by matching the correct letter in front of the statement according to the following scheme: Cognitive (1), Affective (2), Psychomotor (3).

_____64. is able to accurately evaluate the best of two solutions to a geometry problem using standards given by the teacher.

_____65. responds with tolerance for others by displaying good manners toward those of minority groups.

_____66. knows the names and contributions of the five key curriculum workers as described in class.

_____67. properly knits a baby blanket, with a frequency of ten stitches per minute.

_____68. is willing to respond to the questions on the Minnesota Teacher Attitude Inventory.

_____69. applies instructional principles properly in planning daily lessons.

_____70. plays table tennis for a one-hour duration, beating three inexperienced girls 100% of the time.

_____71. comprehends the Gettysburg Address.

_____72. knows 80% of the words on a spelling quiz.

_____73. displays a value for higher mathematics by attending lectures on the subject.

Correctly match the following:

74.	_____	Knowledge	a. create or form new ideas
75.	_____	comprehension	b. judge or select
76.	_____	application	c. break into parts
77.	_____	analysis	d. recall or recognize
78.	_____	synthesis	e. other
79.	_____	evaluation	

Correctly match the following:

80.	_____	Receive	a. compliance or obedience
81.	_____	Respond	b. internalization of values
82.	_____	Value	c. action consistent with values
83.	_____	Organization	d. to be aware
84.	_____	Characterization	e. belief and worth

Objective #7

In the follcwing exercise match the appropriate cognitive variables or terms. A- analysis, B- application, C- evaluation, D- systhesis, E- other

_____85. The student participating in an American Problems class will develop the ability to analyze the political structure of the United States as measured by a teacher-designed test.

_____86. The student enrolled in the non-graded elementary school program will develop his ability to apply science concepts as determined by a teacher-designed test.

_____87. The student enrolled in an American Government course will be able to evaluate the accuracy of statements in relation to situations in governmental settings as measured by teacher-made examination.

_____88. The student participating in a reading program will develop his ability to comprehend prwnted material as measured by teacher observation.

_____89. The student enrolled in a seventh grade mathematics course will demonstrate his ability to synthesize as measured by the teacher's observation of his ability to design an original numeration system.

_____90. The student enrolled in a general mathematics course will improve his knowledge of computational skills as measured by the arithmetic computation section of the Stanford Achievement Test.

Objective #8

91. One way in which a written behavioral objective for teaching may differ from a non-behavioral objective is that the behavioral objective always specifies:

A. Teaching methods
B. Teacher behavior
C. Length of a teaching unit
D. Criteria for measurement

92. In a behavioral objective, the audience is:

A. All the students in a particular grade or level
B. Some of the students in a particular grade or level
C. A group of students who are expected to reach the criterion in the behavioral objective
D. A group of students who behaved as the objective indicates

93. The "conditions" of a behavioral objective specify:

A. The setting in which the students' behavior is to occur
B. The actions which the teacher will observe
C. The actions of the lender
D. Criteria for measuring the student behavior

94. The "behavioral" aspect of a behavioral objective specifies:

A. Teacher behavior
B. Pupil Behavior
C. Behavioral conditions
D. Measurement of behavior

95. The three main characteristics of an instructional objective are:

A. Behavioral terms, standards, clarity
B. Standards, conditions, behavioral terms
C. Criteria, standards, behavioral terms
D. Clarity, conditions, behavioral terms
E. None of the above

96. The best definition of description of standards is:

A. an indication or acceptable performance in terms of speed or accuracy
B. the verb that indicates the measurable behavior
C. a description of the conditions under which the student is to perform
D. none of these

97. The best definition of conditions is:

A. an indication of acceptable performance in terms of speed or accuracy
B. the verb that indicates the measurable behavior
C. a description of the circumstances under which the student is to perform
D. none of these

Objective #9

Each of the following statements is a part of a behavioral objective. For each statement select the answer which best describes what the statement refers to in the objective.

98. . . . within a period of 20 minutes . . .

A. Audience
B. Behavior
C. Condition
D. Degree

99. . . . the first year college geography class . . .

A. Audience
B. Behavior
C. Condition
D. Degree

100. . . . given a set of carpenters tools . . .

A. Audience
B. Behavior
C. Condition
D. Degree

101. . . . without the use of references . . .

A. Audience
B. Behavior
C. Condition
D. Degree

102. . . . all auto repair men in electrical circuiting will . . .

A. Audience
B. Behavior
C. Condition
D. Degree

103. . . . locate and label . . .

A. Audience
B. Behavior
C. Condition
D. Degree

104. . . . with a slide projector and slides . . .

A. Audience
B. Behavior
C. Condition
D. Degree

105. . . . identify the areas containing salt, phosphorous and . . .

A. Audience
B. Behavior
C. Condition
D. Degree

In the following objectives, different parts of the objectives are numbered. Match the number with the following code to indicate whether the numbered parts are behavioral terms, conditions or standards:

1. behavioral terms
2. conditions
3. standards

The student will use a slide rule (106) to compute (107) square roots with accuracy to one decimal place. (108)

The student, given samples of selected minerals, (109) will identify (110) the minerals with 90% accuracy (111)

Objective #10

From each of the following groups of objectives select the one objective which is most nearly stated in behavioral terms.

112. A. To teach the students how to build a 3 x 5 inch jewel box . . .
B. The student will learn the principles of constructing small boxes . . .
C. Each 10th grade shop student will build a 3 x 5 inch jewel box . . .
D. To show 10th grade students the proper way to construct a 3 x 5 inch box . . .

113. A. To remember the names of the ten provinces of Canada in such a way as to . . .
B. To learn and remember the names of the ten provinces of Canada . . .
C. To appreciate the importance of the ten provinces of Canada . . .
D. To name and label the ten provinces of Canada on a blank map showing only . . .

114. A. To learn the names of the different latitudes of . . .
B. To write on an outline map the names of the different latitudes of . . .
C. To know the names of the different latitudes of . . .
D. To remember how to identify the different latitudes of . . .

115. A. To teach the fundamentals of diagraming electrical circuits . . .
B. To learn the fundamentals of diagraming electrical circuits . . .
C. To diagram an electric circuit with all the fundamentals . . .
D. To know how to diagram an electrical circuit.

116. A. To define the terms decagon, geometry, and equilateral . . .
B. To learn the terms decagon, geometry and equilateral . . .
C. To know the concepts decagon, geometry and equilateral . . .
D. To understand the terms decagon, geometry and equilateral . . .

117. A. To explore the identification of various types of vegetation . . .
B. To name and describe in writing ten types of vegetation . . .
C. To learn the names of ten different types of vegetation . . .
D. To know the names of ten different types of vegetation . . .

118. A. To point out five essential points on a map . . .
B. To learn about five essential points on a map . . .
C. To know and understand five essential points on a map . . .
D. To appreciate the value of knowing five essential points on a map . . .

From each of the following groups of behavioral objectives select the one that most accurately describes the <u>desired behaviors</u>.

119. A. Locate ten major oceans, bays and straits on an outline map.
B. Identify ten major oceans, bays and straits on an outline map.
C. Write the names of ten major oceans, bays and straits on an outline map.
D. Be able to recognize ten major oceans, bays and straits on an outline map.

120. A. To send a four-word message by Morse Code with a blink light.
B. To send a Morse Code message.
C. To send a message with a blink light.
D. To send a message using a code.

121. A. Must be able to read Spanish writing.
B. Must translate Spanish into English verbally.
C. Must read a Spanish paragraph and translate orally into English
D. Must be able to tell the difference between languages.

A.

122. ∧ Must write a Campbell style library paper of at least ten pages.
B. Must show an ability to write a library paper.
C. Must write a Campbell style library paper and finish it.
D. Must be able to write a paper of ten pages or more.

123. A. Must give 4 examples of methods used to teach biology.
B. Must write examples of 4 basic instructional techniques in biology.
C. Must demonstrate an ability to teach biology 4 different ways.
D. Must show 4 examples of how to teach biology.

124. A. Find the ten largest cities in Canada.
B. Locate the position of each of the ten largest cities in Canada.
C. Write a list containing the ten largest cities in Canada in order of size.
D. Recognize the rank of each of the ten largest cities in Canada.

125. A. Write on an isothermal map with a red pencil accurately.
B. Find the three spots on an isothermal map with heaviest rainfall.
C. Mark with a red pencil the 3 areas on an isothermal map with heaviest rainfall.
D. Locate and recognize areas of heavy rainfall on an isothermal map.

From each of the following groups of statements select the one wh ch most clearly specifies an acceptable <u>level of performance</u>.

126. A. To write a topic sentence suitable for three given related sentences.
B. To write a good topic sentence without error.
C. To write accurately a topic sentence in 3 minutes.
D. To write a sentence for any topic.

127. A. To obtain a score of 50% on a final test for the course.
B. Get a score of 50 or more on a 100 item final.
C. Score better than at least half the class on the final test in this course.
D. Must be able to answer correctly at least 50% of the items on a 100 question true-false test.

128. A. Write the names of the Canadian provinces on an outline map.
B. Write the ten provinces on an outline map provided in class.
C. Write the names of at least 7 of the 10 Canadian provinces in a 5 minute period.
D. In five minutes write the names of ten provinces on a Canadian Map.

129. A. To underline verbs in sentences accurately.
B. To locate and underline verbs in sentences correctly.
C. To underline all verbs in 10 sentences in 15 minutes with 2 or fewer errors.
D. To write all verbs from 10 sentences on a separate sheet of paper.

130. A. By labeling a given outline map of waterways correctly within ½ hour.
B. By being able to look at an outline map and locate waterways correctly.
C. By placing waterways on an outline map ccurately.
D. By labeling without error all the waterways on an outline map in 30 minutes.

131. A. Must compute accurately to 1 decimal place at least 20 of 30 given division problems.
B. Must work out long division problems in such a way as to demonstrate ability.
C. Finish accurately an assignment calling for solution of long division.
D. Must be able to work 20 long division problems in 30 minutes.

132. A. Must be able to keep time to a given record of music.
B. Must clap hands in 4/4 rhythm through ten bars of "Ten little Indians."
C. Must correctly clap in 4/4 rhythm, 4 counts in each measure, to a recording of "Ten Little Indians."
D. Must be able to demonstrate the ability to keep time to a given record.

From each of the following groups of statements select those which describe a <u>condition</u> under which an objective is to be measured.

133. A. Must be able to identify concs, cylinders, and prisms
B. Given a set of geometric shapes
C. 9th grade geography students
D. Select the proper location of major rivers.

134. A. Without the aid of references.
B. 33 correct out of a possible 50
C. 9th grade geography students.
D. Select the proper location of major rivers.

135. A. Compute the area of a circle.
B. Without the aid of a slide rule.
C. Following the proper formulas.
D. 9th grade algebra students.

136. A. Given a problem of the following class.
B. Select the correct answer in 60% of the class
C. Be able to answer correctly
D. the entire 12th grade calculus group

137. A. In a period of less than 1 hour
B. without the aid of a reference map
C. find the location of a major continent
D. correctly in 40% of all cases

138. A. By arranging parallel
B. The student will identify the label
C. Three of the basic map projections
D. Will spell all three correctly in a period of 5 minutes

139. A. The student will solve an algebraic equation
B. Given a linear equation with one unknown
C. Within a period of 40 minutes
D. And follow the correct procedures

Which of the following objectives are stated adequately?

1. The student will write several paragraphs about the system of democratic government in the U.S.
2. Given alternatives, the student will select the appropriate definition of instructional technology with 100% accuracy.
3. The student will solve, without error, 20 algebra problems, without the aid of the textbook.
4. The student will write an essay describing events leading to the stock market crash of 1929.

140. a. 1 and 3 only
b. 1, 2, and 3 only
c. 2, 3, and 4 only
d. 2 and 3 only
e. 2 only

Objective #11

No criterion items

Objective #12

The following behavioral objectives are followed by a list of the four basic requirements necessary for a well stated objective. Select that requirement which you feel is least adequately met, or has been omitted altogether.

141. The sixth grade social studies student, given a slate outline map, will write the names of continents on it.

A. Audience
B. Behavior
C. Condition
D. Degree

142. Given roughly circular shapes with various arrows indicating direction the student shall select without error in a 5 minute period all those whose arrows indicate a clockwise rotation.

A. Audience
B. Behavior
C. Condition
D. Degree

143. The ninth grade social studies student will locate and name at least 4 of the 5 climatic areas of Canada.

A. Audience
B. Behavior
C. Condition
D. Degree

144. By the end of two months they should be able to type 20 words per minute for a period of five minutes with less than three errors.

A. Audience
B. Behavior
C. Condition
D. Degree

145. On an outline map provided, ninth grade geography students will identify and label the major rivers of the U.S. and Canada.

A. Audience
B. Behavior
C. Condition
D. Degree

In the most of the following statements of behavioral objectives one or more parts have been worded badly or left out completely. For each one select the part or parts you think are inadequate and mark the appropriate response(s).

146. The student should know the names of three mathematicians and contribution of each to geometry.

A. Audience
B. Behavior
C. Conditions
D. Degree
E. All of these
F. None of these

147. Each student will write a topic sentence suitable for three given related sentences.

A. Audience
B. Behavior
C. Conditions
D. Degree
E. All of these
F. None of these

148. The student will identify at least three key steps in the proof of "The square root of two is an irrational number."

A. Audience
B. Behavior
C. Conditions
D. Degree
E. All of these
F. None of these

149. Given a subject which is consistently classified under the same number, to tell from the card catalog where to look for books in that subject. (Give call number as far as it consistently occurs.)

A. Audience
B. Behavior
C. Conditions
D. Degree
E. All of these
F. None of these

150. Students show perception of tonal relationships within a scale (major or minor) by singing with syllables or numbers, a familiar song at a tempo established by the teacher.

A. Audience
B. Behavior
C. Conditions
D. Degree
E. All of these
F. None of these

151. Given twenty notes written on a staff on the board with the bass clef, the class must write down the names of these notes in one minute, as indicated by teacher's start and finish signals, based on teacher's stop watch.

A. Audience
B. Behavior
C. Conditions
D. Degree
E. All of these
F. None of these

152. Given the titles of five books, to locate the names of the authors in the card catalog and write down the authors and titles in acceptable bibliographical form.

A. Audience
B. Behavior
C. Conditions
D. Degree
E. All of these
F. None of these

153. Each student will give the root meaning of the terms "geometry," "quadrilateral," "decagon," "circumference," and "inscribed."

A. Audience
B. Behavior
C. Conditions
D. Degree
E. All of these
F. None of these

154. The student will identify all basic shapes (cylinder, cone, prism, cube, and sphere) used in familiar buildings and structures.

A. Audience
B. Behavior
C. Conditions
De. Degree
E. All of these
F. None of these

155. Spell correctly the following words after a 20 minute oral study period; cat, dog, bull, white, store. This will be a written exam which will last 5 minutes.

A. Audience
B. Behavior
C. Conditions
D. Degree
E. All of these
F. None of these

156. At the end of the two week library session, the pupils will locate, by the use of the card catalog, five books named by the instructor. A maximum time of five minutes will be allowed.

A. Audience
B. Behavior
C. Conditions
D. Degree
E. All of these
F. None of these

157. An objective requiring the student to decide among several manipulative behaviors and then to actually perform one of them involved which performance(s)?

A. verbal
B. discrimination
C. motor
D. 1 and 2
E. 2 and 3

158. Verbs such as describe, explain, list, name, are indicators of objectives which are primarily:

A. verbal
B. discrimination
C. motor
D. 1 and 2
E. 2 and 3

159. Classify the following performance requirements as:

A. verbal
B. motor
C. discrimination
D. 1 and 3
E. 2 and 3

160. explaining how to shift gears on a car

161. constructing a right triangle

162. sorting objectives as acceptable or unacceptable

163. listing recent bills passed by Congress

164. adjusting color reception on a television

Objective #13

An objective requiring the student to decide among several manipulative behaviors and then to actually perform one of them involved which performance(s)?

165. A. verbal
B. discrimination
C. motor
D. 1 and 2
E. 2 and 3

Objective #14

Select out, from the following statements, the correct decision-rule for specifying a goal in behavioral terms:

166. A. analyze goal into successive smaller component parts until a terminal objective can be written in behavioral terms.
B. determine which domain that the goal fits, and choose the appropriate verb from the domain's categories.
C. deductively determine tha major enabling objectives, and from them, induce the terminal objective.
D. determine the appropriate audience for the objective and match with appropriate learning conditions.

Objective #15

167. An interim objective is:

A. A part of a larger terminal objective which appears as part of the terminal performance.
B. a temporary pattern aiding the student in learning terminal performance.
C. both of the above
D. neither of the above

Objective #16

168. An interim objective is:

A. A part of a larger terminal objective which appears as part of the terminal performance.
B. a tempory pattern aiding the student in learning terminal performance
C. both of the above
D. neither of the above

Objective #17

From the following statements giveing reasons for accepting behaviorally written objectives, select the one that would be most appropriate according to an instructional technologist:

169. A. guides the student in reaching the objective
B. guides the teacher in setting up appropriate learning conditions
C. both a and b
D. neither a nor b

Objective #18

From the following statements giving reasons for accepting behaviorally written objectives, select the one that would be most appropriate according to an instructional technologist:

170. A. guides the student in reaching the objective
B. guides the teacher in setting up appropriate learning conditions
C. both a and b
D. neither a nor b

Objective #19

In the following, randomly ordered objectives there is one terminal objective, there are four enabling objectives at level one, and there are 12 enabling objectives at level two. Use the following code for identifying the objectives:

A. terminal objective
B. Enabling objective (level 1)
C. Enabling objective (level 2)
D. Other

171. Given a functioning, conventional time-piece, to orally state the time: 1) with minutes first (15 minutes until 12), 2) with the hour first (12:15) within a 2 minute error limit, and within 5 seconds of the stimulus.

_____

Enabling objectives

172. Given a time piece, to orally name 10 randomly selected numbers without divisions without error, in 5 minutes.

_____

173. Given a time piece, to identify each of the minute divisions without error, in random order in 5 minutes.

_____

174. Given a time piece, to identify each of the hour divisions, without error, in random order in 5 minutes.

_____

175. Given a time piece, to correctly pronounce the minute and hour divisions, in random order, without error, within 10 minutes.

_____

176. Given a time piece, to orally name the numbers associated with the hour hand, at 5 selected times.

177. Given a time piece, to identify the hour hand in four different positions, without error, in 2 minutes.

178. Given a time piece, to identify the number of the hour ahead of the hour hand, at 4 different times.

179. Given a time piece, to identify the number of the hour behind the hour hand, at 4 different settings without error.

180. Given a time piece, to orally name the numbers associated with the minute hand, at 5 selected times.

181. Given a time piece, to identify the number of the minute ahead of the minute hand, at 4 different times, without error.

182. Given a time piece, to identify the number of the minute behind the minute hand, at 4 different time settings, without error.

183. Given a time piece, to orally state the time in terms of the hour to come, or the present hour, at 4 different settings without error, in two minutes.

184. Given a time piece to state the time using the present hour first (11:45) at 4 different settings without error, in 2 minutes.

185. Given a time piece to state the time using the hour to come (15 until 12) at 4 different settings without error, in 2 minutes.

186. Given a time piece, to orally count backward or forward, without error.

6 Hours

FUNCTION: VII & VIII: Evaluation and Research

Module I

Title: Basic Descriptive Statistics

Prerequisites: Function I through VI

Behavioral Objectives:

1. Given a list of common descriptive statistical terms and a list of accompanying definitions, the student will match the terms and their definitions with at least 90% accuracy.

2. Given a set of test scores, the student will construct a frequency distribution histogram for those scores.

3. Given a frequency distribution, the student will correctly calculate the range, variance, standard deviation, mean, median, and mode.

4. Given a frequency distribution, the student will calculate the score corresponding to a given percential rank.

5. The student will correctly interpret a student's score in his own words when given that score as a: (a) percentile; (b) standard score; (c) grade equivalent; (d) criterion reference; and stanine scores.

Pre-test: Examples of criterion items are given at the conclusion of the module.

TREATMENT:

1. Readings:

   Susan J. McFarland and Carl F. Hereford, Statistics and Measurement in the Classroom, Dubuque: W. C. Brown, second edition, 1971. (Relevant Sections)

   Thomas R. Knapp, Statistics for Educational Measurement, Scranton: Intext, 1971. (Relevant Sections).

2. Large group lecture on relevant concepts.

3. Classroom and take home exercise analogous and equivalent to objectives.

Post-test: Equivalent form of pre-test.

Pre-Test, Post-Test

1. Match the term on the left with the letter of its definition on the right.

____ variable	a. average squared distance from mean
____ frequency distribution	b. degree of association between two variables
____ mean	c. arithmetic average of a set of scores
____ median	d. bargraph of frequency distribution
____ mode	e. measure of dispersion, square root of variance
____ range	f. attribute possessed differentially
____ variance	g. proportion of class a particular score exceeds
____ standard deviation	h. middle score in a set of scores
____ correlation	i. distance from mean in standard deviation units
____ histogram	j. average score at a particular month of the school year
____ percentile rank	k. most frequently occuring score
____ standard score	l. comparison with a standard of performance ordered
____ grade equivalent score	m. set of test scores for a class
____ criterion referenced score	n. difference between highest and lowest score
	o. measure of central dispersion
	p. average distance of score from the mean
	q. score that stands for a grade level

Alternate item:

Short answer definitions of each of the above items.

2. Construct a frequency distribution and histogram for the following scores from a classroom test.

99	78	77	84	93
87	62	60	88	82
94	91	97	82	79
82	85	99	80	76

3. Calculate the mean, median, mode, variance, range, and standard deviation for the frequency distribution in the previous problem.

4. In the above frequency distribution, calculate the score which falls at the 50th percentile.

5. John, a fourth grader, took an achievement test battery in September. Explain his test results so that his parents can understand them when John tells you that he scored

   a) at the 78th percentile in Reading Speed
   b) at a Z score of +.5 in Reading Comprehension
   c) at a grade equivalent of 3.9 in Arithmetic Skills
   d) mastery level for Punctuation of Sentences.
   e) 4th stanine in Arithmetic Reasoning.

6 hours

Module II

Title: Interpreting and Using Standardized Test Results.

Prerequisites: Module I

Behavioral Objectives:

1. The student will demonstrate his knowledge and comprehension of basic testing terminology by correctly responding to at least 80% of the items presented in a five-choice multiple choice format.

2. Given data relating to pupil test scores, the student will correctly interpret in his own words the meaning and relative precision of the data.

3. Given a set of test results and other data relating to a pupil with a learning problem, the student will devise two strategies related to that data designed to improve the pupil's performance.

Pre-Test:

Examples of criterion items are given at the conclusion of the module.

Treatment:

1. Readings: Susan J. McFarland and Carl F. Hereford, Statistics and Measurement in the Classroom. Wm. C. Brown, 1971 (relevant sections). Leona A. Tyler, Tests and Measurements. Prentice Hall (relevant sections). Henry S. Dyer, Is Testing a Menace to Education? (Handout)

2. Large group lecture on relevant concepts.

3. Classroom and takehome exercises analogous and equivalent to objectives.

Post-test:

Equivalent form of pre-test.

Sample Criterion Items

Objective One:

Group intelligence tests, compared to individual intelligence tests, tend to:

a. be cheaper to administer
b. provide a wider range of scores
c. measure a greater variety of skills
d. do two of the above.
e. do a, b, and c.

Other questions will deal with:

a. reliability
b. criterion related validity
c. content validity
d. table of specifications
e. norm reference
f. criterion reference
g. norm group
h. power test
i. speed test
j. mastery test
k. subtest
l. achievement test
m. intelligence test
n. aptitude test
o. standard error of measurement
p. group test
q. individual test
r. verbal test
s. performance test

Objective Two:

Sharon is a tenth grader from an upper-middle class home and goes to a public school in an affluent suburb. Her file shows the following test results:

a. a score of 120 on a standard group intelligence test.
b. a total score of 125 on a WISC, with a verbal score of 130 and a performance score of 120.
c. a score equivalent to 10.0 grade level on a math achievement test whose norm group is a cross-sectional sample of tenth graders.

In your own words, interpret the meaning and relative precision of this test data.

Objective Three:

John is a first grader who is reluctant to try any tasks which require hand manipulation skills. Those tasks he has done have resulted in sloppy drawings, lettering, etc., which have frequently been made fun of by other students. His file shows an individual intelligence score of 105, with a verbal score of 115 and a performance score of 90. A physical examination revealed no presence of neurological or other physical handicaps. John's score on a word recognition test put him at a 2.0 grade level when compared to the test's representative norm group. He has expressed an interest in books about airplanes and ships.

Given this data, suggest two strategies designed to improve John's hand manipulation skills.

6 Hours

Module III

Title: Classroom Test Construction

Prequisites: Module II

Behavioral Objectives:

1. Given a list of advantages and disadvantages of item formats, the student will with at least 90% accuracy determine whether those advantages and disadvantages are most characteristic of essay or objective test items.

2. Given examples of three cognitive behavioral objectives in his own level and/or subject matter area, the student will write appropriate evaluation item for each.

3. Given an instruction unit (or module or chapter, etc.) in his own subject area, the student will construct an hour-long sequenced examination which evaluates the objectives he writes for that unit. These objectives should require skills from the knowledge through the analysis level of the cognitive taxonomy. *

Pre-Test:

Examples of criterion items for objectives one and two are supplied at the conclusion of the module.

Treatment:

1. Readings:

   Susan J. McFarland and Carl F. Hereford, Statistics and Measurement in the Classroom. Dubuque: Wm. C. Brown, 1971.

   David A. Payne, The Specification and Measurement of Learning Outcomes. Waltham, Mass.: Xerox, 1968.

   Benjamin Bloom, et. al., Handbook on Formative and Summative Evaluation of Student Learning. New York: McGraw Hill, 1971 (Reference Use)

   Robert T. Ashburn, Experiment in The Essay-type Examination (Handout)

2. Large group lectures on relevant concepts.

3. Classroom and takehome exercises analogous and equivalent to objectives.

Post-Test:

Equivalent form of pre-test.

* See note for elementary students on next page.

Sample Criterion Items

Objective One:

Place an E in the blank if the advantage or disadvantage is most associated with essay items; an O if it is most associated with objective items.

Advantages	Disadvantages
_____ essay to write	_____ takes time to write
_____ samples content well	_____ often scored unreliably
_____ esay to analyze statistically	_____ subject to bluffing
_____ appears to measure higher reasoning	_____ takes time to score
_____ allows for student creativity	_____ subject to guessing
_____ easy to score	_____ limited sampling of content
_____ test organization abilities	_____ affected by spelling and penmanship
_____ can measure opinions	_____ clues in grammar affect scores

Objective Two:

For secondary social studies:

a. The student will demonstrate his knowledge and comprehension of the Constitution by correctly responding to at least 35 out of 50 five-choice multiple choice items.

b. Given a list of ten historical events causally related and pertaining to the American Revlolution, the student will place these in the correct chronological order with 80% accuracy.

c. Given five short statements written by the framers of the Constitution, the student will pick four and: (1) identify a potential author; and (2) furnish a rationale for that choice. (The student will be evaluated only by the rationale furnished in part two)

Write one appropriate question for each of these objectives.

Objective Three: Notes:

The instructional units, modules, etc. which the students work from should be varied in order to insure origininality of performance.

For elementary students, this objective should be change to require three twenty minute evaluations (of any mode) in three different subject areas.

4 Hours

Module IV

Title: Assessing Classroom Test Results

Prerequisites: Module III

Behavioral Objectives:

1. Given test data on ten items, the student will calculate and interpret difficulty and discrimination indices with 80% accuracy, and supply revision recommendations when appropriate.

2. Given the specific characteristics of classroom test results, the student will: (1) supply and interpretation and defense as to extent and kind of student learning demonstrated; and (2) diagnose the results as to their implications for subsequent teacher behavior.

Pre-Test:

Examples of the criterion items are given at the conclusion of the module.

Treatment:

1. Readings:

   Susan J. McFarland and Carl F. Hereford, Statistics and Measurement in the Classroom. Dubuque: Wm. C. Brown, 1971.

   (relevant sections)

   David A. Payne, The Specification and Measurement of Learning Outcomes, Waltham, Mass.: Xerox, 1968.
   (relevant sections)

2. Large group lecture on relevant/concepts.

3. Classroom and take home exercises analogous and equivalent to objectives.

Post-Test:

Equivalent form of pre-test.

Sample Criterion Items

Objective One:

For a particular four option multiple choice question, the top half of the class selected a) 4 times, b) 8 times, c) twice, and d) once. The bottom half of the class selected option a) twice, b) 3 times, c) 4 times, and d) 6 times.

1) If b was the correct option, what was the difficulty index of this item?
2) What was the discrimination index of this item?
3) What revision, if any, would you suggest for this item?

Objecitve Two:

After a unit on multiplication, Mr. McDonald gives a ten problem test to his students. There are no easy problems, as he doesn't want to "give any points away." All problems require the students to demonstrate application level skills. The test results show a wide disparity. Six students get seven or more problems correct, but the remaining 24 students score three or less correct. No partial credit is given, as Mr. McDonald believes that "you only get paid for right answers in life."

a. What inferences can be made about student learning in this problem?

b. What implications does this hold for future teacher behavior?

III

1. Educational Psychology/Learning-Teaching
2. Basic Behavioral Operations
3. Consequences to Increase Behavior/Identifying and Categorizing Reinforcers
4. Specifying Behavior, Counting Behavior
5. Objectives

1. Given a list of definitions, the student will select the one which corresponds to the term, "reinforcement."

2. Given a series of behavioral situations in which certain behaviors are underlined, the student will place an "R" next to each situation in which the underlined behavior is functioning as a reinforcer.

3. The student will list five categories of consequences, espoused by Madsen and Madsen (Teaching Discipline). Then for each category, he will specify three unique consequences.

4. For each of a series of classroom situations, the student will state one behavior being maintained and one consequence which is maintaining that behavior.

5. The student will name the five ways in which any category of consequences can be used, according to Madsen and Madsen.

6. Given the names of consequence categories and ways in which each is used, the student will be able to generate one unique consequence for each "category-use" in no less than four out of five cases.

7. Given a simulated or actual classroom situation, the student will be able to specify an undesirable behavior and an incompatible behavior. Then he will specify a consequence which will increase that incompatible behavior.

8. In a 5 person (1 teacher, 2 students, 2 observer-critics) role-playing situation, the student will demonstrate as teacher the use of verbal, consumable and token reinforcers, contingent upon the behavior to be increased. He will do this by selecting his reinforcing consequences within the framework of Madsen and Madsen's, "consequence categories" and "ways of use."

9. a) Upon viewing a videotape of an actual classroom situation, the student will be able to state one behavior to be increased and one to be decreased (specifying behavior); state the frequency of occurrence of those behaviors (counting behavior); specify the consequences to be used, and exactly how he would use them; state why he selected each particular consequence; describe the expected outcomes; describe the exact procedures he would employ if the expected outcomes did not occur.

b) The above will then be completed by the student in an actual classroom situation.

C. Pretest

1. Select the definition which most corresponds to the term, "reinforcement", by placing an "X" in the blank opposite the appropriate letter.
   a) _____ A non-observable term which we use to describe something.
   b) _____ Something we use to increase and maintain the occurrence of frequent behavior and decrease the occurrence of infrequent behavior
   c) _____ Something we use to increase the occurrence of infrequent behavior and decrease the occurrence of frequent behavior. and maintain frequent behavior.

2. Place an "R" to the left of the situation in which the underlined behavior is functioning as a reinforcer.
   a) _____ Whenever Morris gets out of his seat, teacher yells, "Sit down!" Morris is out of his seat more than ever lately.
   b) _____ Every time Sally would merely open her reader, the teacher would give her a marshmallow. Sally spends much time reading stories now.
   c) _____ Harriet washes the dishes once a week without being asked by her mother. Every Friday, mother gives Harriet her $2.00 allowance. Harriet still washes the dishes only once a week without being asked.
   d) _____ Tommy refuses to share his toys with Billy. Mother has repeadedly warned Tommy that if "he doesn't share his toys, she will take them away." Tommy still doesn't share his toys.
   e) _____ Marvin constantly yells out the answers to teacher's questions without raising his hand. Lately, the teacher has not looked in Marvin's direction. His yelling-out behavior only occurs about once a week now.
   f) _____ Tammy puts her fingers on the light socket in her room about ten times per day. Last night, when Tammy's finger touched the socket, mother slapped her hand and yelled, "No!" Tammy hasn't placed her hand on the socket since then.
   g) _____ George hasn't shoveled snow yet this winter. Last night, while it was snowing, dad said he'd give him two tickets to the opera if he shoveled the snow. George still hasn't shoveled snow yet this winter.

3. List the five categories of consequences espoused by Madsen and Madsen (Teaching Discipline). Then for each category, supply three unique consequences.

4. For each of the following situations, enter in the appropriate spaces provided, one behavior being maintained and one consequence which is maintaining that behavior.

a) Occasionally, Harvey would run from his seat to the teacher's desk. At this time, the teacher would place her hand on his shoulder, smile and say, "What's up Harv'"? So far this week, Harvey has been running up to the teacher's desk about once every five minutes.
Behavior: Consequence:

b) Judy used to sharpen her pencil once an hour, at which time her teacher would yell, "Judy, sit down and be quiet!" Now Judy sharpens her pencil once every ten minutes.
Behavior: Consequence:

c) For every page of arithmetic homework Mark completed, his mother gave him a quarter. Mark has completed eight pages so far this week and is still going strong!
Behavior: Consequence:

d) Nancy rarely got into bed before 9 p.m. this past year. Last week, her mother frowned upon seeing Nancy walking around at 9:25 p.m. Then she yelled, "get into bed", and proceeded to spank her as she dashed into the bedroom. This week, Nancy has been in bed at 8:45 p.m. every night.
Behavior: Consequence:

5. Name the five ways in which any category of consequences can be used, according to Madsen and Madsen (Teaching Discipline).

6. Below are several pairs of consequence categories and ways of use. For each pair, supply one unique consequence.

a) Words-spoken: Approval
b) Closeness: Ignore
c) Activities and Privileges: Threat of Disapproval
d) Things: Withholding approval
e) Expressions: Disapproval

7. From the situation which follows specify:
a) An undesirable behavior
b) An incompatible behavior to (a).
c) A consequence which will increase that incompatible behavior

French class had just begun. Mrs. Moreau was writing the day's lesson on the board. Most of the class was taking notes, while Charles was passing secret notes to Judy, who was sitting next to him. Barbara was suddenly called on to recite. An expression of relief passed across Charles' face as he put his head down on his desk to take a short nap. What an opportunity for George to sneak up on Charles and shoot him with a rubberband!

"Ouch! Mrs. Moreau! Mrs. Moreau, I've been shot, I'm dying!"

The teacher frowned at Charles as she spoke.

"Charles, if you open your mouth once more without raising your hand I'm going to force a basketball through it!"

8. a) Pair off with 4 other students. Obtain the "Increasing behavior" role cards. One person should draw a teacher card. Two people should draw the student cards. The remaining two should be observer-critics. When you play the teacher you must be able to:

   1. Specify the undesirable behavior
   2. Count the frequency of undesirable behavior
   3. Specify and apply three consequences which will increase the incompatible behavior such that:

      a. each consequence samples a different consequence category (Madsen and Madsen)
      b. Each consequence samples one of the following "ways of use": ignore, approval, disapproval
      c. No two consequences can employ the same way of use.

   4. Switch roles and draw new role cards until everyone has played student, teacher, and observer-critic.

9. a) View a videotape of a classroom situation. Then:

   1- State one behavior to be increased and one to decreased (specify behavior).
   2- State the frequency of occurrence of those behaviors (count behavior).
   3- Specify consequences to be used and <u>exactly</u> how you would use them.
   4- State <u>why</u> you selected each particular consequence.
   5- Describe the <u>expected</u> outcomes.
   6- Describe the exact procedures you would employ if the expected outcomes <u>did not occur</u>.

   b) The above must also be completed in an <u>actual</u> classroom situation.

7. Treatment

   1&2. Have student read "Consequences" handout and reinforcement on "List of Definitions for Basic Behavioral Operations."

   3. Have students read Madsen and Madsen's <u>Teaching/Discipline</u> Chapters 1-5.

4. In a group of at least 10 have students view "Reinforcement" film from the Basic Teaching Series. Instructor Models the teacher in film in having students develop first a list of behaviors to be produced by microteacher and the consequences the microteacher used to reinforce those behaviors. Write all student responses on the board. Ask students if reinforcement works only with a small class and if it only works with preadolescent children.

5&6. Have students read Madsen and Madsen Chapters 6 and 7.

7. Practice in class using SRA incident #8 (Jack Brogan). Have students specify the undesirable and an incompatible behavior. Have students count the frequency of the incompatible behavior. Have students generate a list of at least five potential consequences which could increase the incompatible behavior.

8. Have instructor and four students practice using the "Increasing Behavior" role-playing cards with the instructor playing all three roles each time with a different group of four students. The student cards specify different behaviors to be role-played and their approximate frequency of occurrance. The teacher cards specify class parameters such as size and space. The teacher cards also specify other restrictions such as building regulations.

9. Based on the procedures for 1-8.

8. Criterion Assessment

1. Select the definition which most corresponds to the term, "reinforcement", by placing an "X" in the blank opposite the appropriate letter.

a) _____ Something we use to increase and maintain the occurrence of infrequent behavior, and decrease the occurrence of infrequent behavior.

b) _____ An event which increases the probability of most non-observable behaviors.

c) _____ Something we use to increase the occurrence of infrequent behavior and decrease the occurrence of frequent behavior, and maintain frequent behavior.

2. Place an "R" to the left of the situation in which the <u>underlined</u> behavior is <u>functioning</u> as a reinforcer.

a) _____ Yesterday, when Irving had sharpened his pencil for the eighth time, the teacher <u>stamped her foot and yelled</u>, "<u>Sit down!</u>" Today, Irving has already sharpened his pencil ten times.

b) _____ Every time JoAnn raised her hand, the teacher would <u>give her one playing card worth a piece of candy</u> during recess. JoAnn now raises her hand more each day.

c) _____ Paul mows the lawn twice a year. Every week, Paul's mother <u>gives him his fifty-cents allowance</u>, Paul still mows the lawn twice a year.

d) _____ Terry refuses to eat any of his peas. One night, mother told him that if he doesn't eat his peas, he will not be allowed to watch t.v. that night. Terry still refuses to eat peas.

e) _____ Sonny is constantly running up to the teacher's desk without permission. One day, the teacher decided that when Sonny approaches the desk she would turn to another student and begin talking to him. Sonny has only approached the teacher's desk once without permission during the last two weeks.

f) _____ Murray, a first-grader, persists in chewing his pencil point while he is doing homework. Yesterday, upon seeing this, his mother slapped his hand and said, "Get that dirty thing out of your mouth!" Murray hasn't placed the pencil in his mouth all day.

g) _____ Bonnie has never vacuumed her apartment. Her roommate, quite peeved by this state of affairs, offerred Bonnie a blind date if she'd vacuum the apartment Saturday. The apartment was as dirty as ever all day that Saturday.

3. List the five categories of consequences espoused by Madsen and Madsen (Teaching Discipline). Then for each category, supply three unique consequences.

4. For each of the following situations, enter in the appropriate spaces provided, one behavior being maintained the one consequence which is maintaining that behavior.

a) Susan throws about three temper tantrums per day. No sooner did last night's tantrum begin then her mother ran to her, fondled her and said, "There, there, Susan . . ." Today Susan had five tantrums.
Behavior: Consequence:

b) Manny, upon being told to open his science book, hid a comic book in front of it, five times last week. Monday, the teacher caught him, took away the comic and ripped it up. So far this week Manny has already hidden seven comics in front of his science text.
Behavior: Consequence:

c) Every time the teacher approached the right half of the classroom, the students, who would otherwise slouch in their seats and be silent, leaned forward, raised their eyebrows and asked him questions. In the last two days, the teacher has spent 90% of his time lecturing from the right half of the room.
Behavior: Consequence:

d) Victoria rarely gets home from a date before 2 a.m. Last month, her mother upon seeing her come in, waved her finger at Victoria and shouted, vehemently, "OK, young lady, you come home one more night after 1 a.m., and you will lose one date for each minute after 1 that you arrive!" During the past four weekends, Victoria has come home at the average of 12:29 a.m.

5. Name the five ways in which any category of consequences can be used, according to Madsen and Madsen (Teaching Discipline).

6. Below are several pairs of consequence categories and ways in which they are used. For each pair, supply one unique consequence.
   a) Closeness: Disapproval
   b) Expressions: Withholding approval
   c) Words-spoken: Threat of disapproval
   d) Things: Ignore
   e) Activities and privileges: Approval

7. From the situation which follows, specify:
   a) An undesirable behavior
   b) An incompatible behavior
   c) A consequence which will increase that incompatible behavior (DRO)

Most of the class was working diligently at preparing the props and backdrop for the class play. Hank, however, preferred painting his classmates to painting the backdrop. Today, Mrs. Criden had just approached Phillip to remove the splinter he had acquired from sitting on the ladder, when Hank grabbed Percy's foot and put it in a bucket of red paint. Percy began to cry. He cried for ten minutes-- five minutes more than Phillip whose posterior had won a costly victory over a splinter.

"Ugh!" Mrs. Criden sighed, "Percy, stop crying this instant! And Hank, remove Percy's leg from the paint bucket, clean him off and go stand in the corner!"

So Hank cleaned Percy up and went to stand in the corner where he took advantage of the opportunity to pour black paint on the head of Ralph, who was also standing in the corner.

8. Same as Pretest (number 6)

9. a) View a video tape of a classroom situation. Then:

   1- State one behavior to be increased and one to be decreased (specify behavior)
   2- State the frequency of occurrence of those behaviors (count behavior)
   3- Specify consequences to be used and exactly how you would use them.

4- State why you selected each particular consequence.
5- Describe the expected outcomes.
6- Describe the exact procedures you would employ if the expected outcomes did not occur.

b) The above must also be completed in an actual classroom situation.

APPENDIX N

CAREER DECISIONS PROGRAM

CAREER DECISIONS PROGRAM
College of Education
The University of Toledo

The Career Decisions Program (CDP) is a three quarter course of competency based education designed in three modules of 25 behavioral objectives. Each entering Freshman is required to complete the course on a pass-no pass basis as a prerequisite to admission to the professional teacher education program.

The purpose of the course is to stimulate and assist the student in making three basic career decisions; (1) whether or not he wants to become a teacher; (2) on which educational level he should teach; and (3) in what subject matter area he should specialize.

Each student spends one hour per week on the campus in large and small group classroom instruction. In addition, and of great importance, he is required to spend one full morning (9:00 a.m. to 12:00 m.) or one full afternoon (1:00 p.m. to 4:00 p.m.) per week in a relevant field experience. He may serve as a Career Decisions Aide (CDA) to a classroom teacher on any instructional level K-12, or as an aide in such related programs as Headstart, Outdoor Education, child social and welfare programs, etc. It is expected that each student will participate on at least two, and preferably three, different instructional levels.

A given CDA will remain in his initial assignment for at least one quarter. By mutual agreement of cooperating teacher and CDA, the student may remain in his initial assignment no more than one additional quarter. At that time, he will be required to move on to a different field experience on a different instructional level.

Laison with the cooperating institutions will be maintained by the University CDP Staff. Cooperating teachers will be asked to evaluate the performance of their CDA on a simple, "satisfactory - unsatisfactory" basis.

Field Component Handbooks have been developed and are available on request. They will be helpful in suggesting areas of activity which are mutually profitable to CDA and the cooperating teacher.

By Spring Quarter, 1972, the program will serve approximately 600 students and their cooperating teachers. Program staff will consist of nine university faculty members and nine graduate assistants.

For further information on any aspect of the program, interested persons are invited to contact

Dr. Wm. R. Beck, Coordinator
Career Decisions Program
College of Education
The University of Toledo

Phone: 531-5711, Ext. 2485

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CAREER DECISIONS PROGRAM

FIELD COMPONENT HANDBOOK

February 1, 1972

CAREER DECISIONS PROGRAM
College of Education
The University of Toledo

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A given CDA will remain in his initial assignment for at least one quarter. By mutual agreement of cooperating teacher and CDA, the student may remain in his initial assignment no more than one additional quarter. At that time, he will be required to move on to a different field experience on a different instructional level.

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HUMAN RELATIONS

The success of this program will lie in the ability of the CDA, the teachers, and the principal to work together. A firm sense of loyalty to the school and proper regard for professional ethics is essential. The CDA must acquaint himself with the general policies of the school. He must maintain strict confidence about the students, students' records, school problems, and his opinions about the teachers with whom he works. Good judgment must be used as to the proper or convenient time for personal contact with the students. Failure to meet these responsibilities may result in the removal of an undergraduate from the program.

In the secondary school it is important that the CDA realize the importance of approaching the experience as a potential teacher of secondary students and not as a recent graduate from their ranks. If the experience is to help the CDA gain the desired insights into the responsibilities of the secondary teacher and his potential for assuming those responsibilities, he must emphasize the teacher's role - not the student's.

LOGISTICS

Each CDA will:

1. Spend one morning or afternoon (9-12 or 1-4) per week at his field assignment each quarter;
2. Notify the agency director in advance if he is unable to appear for his scheduled participation;
3. Arrange with the co-operating to make up unexcused absences (other than illness or emergency) at a time mutually acceptable to CDA and co-operating teacher;
4. Prepare three copies of a written contract which lists his duties and responsibilities for that quarter. The contract shall be acceptable to both parties;

5. Furnish the co-operating teacher with one copy of the contract;

6. Furnish his university seminar instructor with one copy of the contract;

7. Remain with an assigned teacher for a minimum of one quarter;

8. Have the option to extend his field assignment to two quarters with consent of the co-operating teacher;

9. Have a minimum of two different kinds of field experience during the three quarters.

Each co-operating teacher will:

1. Be assigned a maximum of two CDA's each quarter;

2. Agree to develop a written contract with the CDA, which is acceptable to each party;

3. Agree to provide opportunities for the CDA which will enable him to fulfill his contract;

4. Complete a checklist type evaluation form to be furnished him prior to the end of each quarter;

5. Return the completed evaluation form to The University of Toledo Career Decisions Co-ordinator, so that both CDA and the University staff may better assess the success or failure of his field experience;

6. Agree to arrange for private conference when requested by University staff or the CDA.

SCOPE OF CDA RESPONSIBILITIES

THE UNDERGRADUATE WILL NOT BE EXPECTED TO DO ANY OUTSIDE PREPARATION BEYOND HIS DUTIES AS A CDA.

The teacher will be responsible for the evaluation of the CDA. Areas to be considered are:

1. Attendance
2. Rapport with children
3. Ability to work with children
4. Completion of tasks assigned

5. Responsibility, including notifying teacher in case of absence

6. Promptness

7. Emotional Stability

8. Physical Health

9. Adherence to school and classroom policies, such as the dress code

10. At any time the CDA enters a new room or new school, he will be expected to be familiar with and be ready to perform the responsibilities as listed under the first quarter CDA.

CDA RESPONSIBILITIES FOR PRE-KINDERGARTEN EXPERIENCES

First Quarter

Behavioral Objectives

1. Prepare paint, paste and easel.

2. Prepare playdough and clay.

3. Help children with outer clothing as necessary in classroom and lavatory situations.

4. Greet children upon arrival.

5. Help in toileting activities.

6. Explain lavatory procedures.

7. Distribute soap and paper towels.

8. Distribute rest mats.

9. Prepare classroom for the rest time.

10. Locate instructional materials in the classroom.

11. List appropriate instructional materials for these age levels.

12. State the name of the agency director, supervisor, if any, and teacher and assistants to whom you are assigned.

13. Describe fire drill and tornado alert procedures within the building.

14. Check attendance.

15. Listen to the vocabulary of the children.

16. Talk with individual children.

Experiences

1. Deal with routine "emergencies" - jacket zippers, knots, cuts, bloody noses, etc.
2. Assist teacher in regrouping or relocating groups of children.
3. Chaperone field trips, if appropriate -- teacher has main responsibility.
4. Read a story to a small group of children.
5. Assist teacher supervising project work.

Second Quarter

In addition to the First Quarter Prerequisites, the CDA will assume responsibility for performing the activities listed below (nature and number of the projects will be mutually decided upon between the CDA and the teacher -- a minimum of five of the following list is required).

1. Develop an art project with one child.
2. Make a book with one child.
3. Do experiment in science with one child or a small group.
4. Do a taping session with one child or a small group.
5. Help the teacher and children put on a puppet show.
6. Take a small group of children to a nearby public library.
7. Teach a song or simple game to a small group of children.
8. Teach one child a physical skill such as skipping, hopping, walking on a balance beam, etc.
9. Talk with parents as they drop off or pick up children at the center.
10. Set up and put away large muscle equipment such as wheel toys, balls, rocking horse, etc.
11. Accompany a child or group of children to the hospital for a medical examination.
12. Participate in children's choice activities such as water play, sand table, table-top games, blocks, etc.

14. Serve snack or lunch.

Other experiences which the CDA (with the agreement of his co-operating teacher) should attempt to accomplish sometime during the three quarter sequence:

1. Attend a staff meeting.

2. Watch Saturday cartoons and discuss these with the children.

3. Walk or stand within the immediate vicinity of the building at dismissal time in order to observe individual and small groups of children.

4. Observe and assist during a lunch or playtime when children are permitted more free choices.

5. Spend one day on a field trip.

General Guidelines for Working with Young Children

1. It is most important to build a friendly and understanding relationship with the children in the classroom. Learn to accept the child as he or she is, so that the child may in turn accept you as a responsive person.

2. Be sure that the child understands what you are saying when you speak. Gain his attention first and make certain your words are clear and simple. If possible, give only one direction at a time. Be ready to show the child the meaning of your idea if he does not grasp it readily.

3. Young children can become confused or irritated when rushed or pressured, so try not to suggest a change of activity without telling him ahead of time. Do not expect him to stop what he is doing at once, but let him finish what he is doing, if it is at all possible.

4. If a child refuses your direction, "I don't want to," let a few moments go by. Often he will comply if the point is not belabored or argued about. Seek the help of the teacher if you are having difficulty with a child.

5. Let the child take responsibility for himself as soon as he is able.

6. Expect children to spill milk or juice, drop puzzles, etc. Turn these accidents into learning situations by encouraging the child to help with the cleaning-up process.

7. Try to be gentle in your manner and tone of voice.

8. Try to avoid holding children to a uniform standard of performance. Never compare him to someone else; praise him for his own achievement.

9. Praise a child when he makes a new step forward or accomplishes something important to himself, no matter how unsignificant it may seem to you.

10. Give the child a choice of action where this is reasonable, but limit the choice to perhaps one or two choices. For example, "Where would you like to leave your tricycle, John? By the gate, or near the door?"

11. If you really cannot allow the child to make the choice, be direct and quietly firm with the child: "John, please park the tricycle near the gate and come inside now."

12. Avoid nagging; as much as possible avoid conflict and forcing of issues. Children can learn to co-operate rather than being forced into doing what they are told.

CDA RESPONSIBILITIES FOR MULTI-UNIT AND ELEMENTARY SCHOOLS

First Quarter

The following behavioral objectives are to be accomplished during the weeks specified:

Week 1-3

1. Be able to match name of pupil with his face and be able to classify the basic socio-economic characteristics of classroom, school, community (lower-upper, upper-lower, lower-middle, upper-middle, lower-upper, and upper-upper).

2. Locate instructional materials in the classroom.

3. List materials used at the grade level.

4. State names of principal and teacher to whom assigned.

5. Describe fire drill and tornado alert procedures.

6. Explain classroom policy regarding lavatory.

7. Explain school policies concerning dress, arrival times, etc.
8. Demonstrate printing techniques in the primary grades, if appropriate.
9. Grade objective-type tests.
10. Check attendance.
11. Arrange supplies for a lesson.
12. Listen to working vocabulary of children.
13. Converse with individual children.
14. Make flash cards for teaching aids and instructional materials.

Weeks 4-8 (In addition to the above duties)

1. Operate a ditto machine.
2. Operate standard classroom and school equipment.

Experiences

1. Make a bulletin board with a child-teacher design, unless student offers alternative suggestion and the suggestion is approved.
2. Write a story dictated by a child.
3. Write an experience chart (chart story) dictated by a child.
4. Deal with routine "emergencies" - jacket zippers, knots, cuts, bloody noses, etc.
5. Assist teacher in regrouping or relocating groups of children.
6. Chaperone filed trips, if appropriate -- teacher has main responsibility.
7. Read a story to a group of children.

Second Quarter

In addition to the First Quarter Prerequisites, the CDA will assume responsibility for performing and describing his involvement in the activities listed below (nature and number of the projects will be mutually decided upon between the CDA and the teacher -- a minimum of five is required.

1. Develop an art project with one child.
2. Make a book with one child.
3. Do experiment in science with one child or a small group.
4. Do a taping session with one child or a small group.
5. Help a child complete a research project.
6. Make a music presentation to the class.
7. Do individual tutoring.
8. Write a skit with a group of children.
9. Help produce a puppet show.
10. Practice a play with a group.
11. Lead a group of children to the library.
12. Teach a song, game or folk dance to a group of children.
13. Conduct a spelling test.
14. Listen to a child's individual report.
15. Teach a child a physical skill, e.g., skating, swimming, skipping, jumping rope, etc.

Required Experiences Sometime During the Career Decisions Program

The CDA should accomplish the first five behavioral objectives listed and as many others as can be arranged:

1. Attend a team meeting (if you are in a team-teaching school).
2. Read a book recommended by a child.
3. Watch Saturday cartoons and discuss with children.
4. Attend a children's matinee and discuss with children.
5. Walk or stand within immediate vicinity of the school at dismissal time in order to observe individual and small groups of children.
6. Request permission to observe a teachers' meeting or a Union meeting, or an Association meeting.

7. Observe and assist an unstructured group, e.g., lunch, lighted school hours, playground.

8. Spend one day at a camping trip or a field trip.

CDA RESPONSIBILITIES FOR SECONDARY SCHOOLS

First Quarter

The following behavioral objectives are to be accomplished during the weeks specified:

Weeks 1-3

1. Be able to match name of pupil with his face and be able to classify the basic socio-economic characteristics of classroom, school, community (lower-lower, upper-lower, lower-middle, upper-middle, lower-upper, and upper-upper).

2. Locate instructional materials in the classroom.

3. List materials used in the subject area(s) being dealt with.

4. State names of principal and teacher to whom assigned.

5. Describe fire drill and tornado alert procedures.

6. Explain school policies and describe rationales concerning dress, arrival times, etc.

7. Grade objective-type tests.

8. Check attendance.

9. Arrange supplies for a lesson.

10. If students are grouped, describe the policy for grouping and the rationale behind it.

11. Listen to working vocabulary of students.

12. Converse with individual students.

13. Help teacher prepare instructional materials such as dittoes, transparencies, etc.

Weeks 4-8 (In addition to the above)

1. Operate a ditto machine.
2. Operate standard classroom and school equipment.

Experiences

1. Help a student or a group of students complete the production of an audio-visual project, e.g., bulletin board recording, slide presentation, etc.
2. Lead a small group discussion.
3. Chaperone field trips, if appropriate - teacher has main responsibility.
4. Present and explain an assignment or activity to the entire class.
5. Participate in classroom discussions.
6. Follow a student's schedule for a day.

Second Quarter

In addition to the First Quarter Prerequisites, the CDA will assume responsibility for performing and describing his involvement in the activities listed below (nature and number of the projects will be mutually required).

1. Help a student complete a research project.
2. Do individual tutoring.
3. Do an experiment in science or conduct original research in some other area with one student or a small group.
4. Do a taping session with one student or a small group.
5. Write a skit with a group of students.
6. Practice a play or skit with a group of students.
7. Help a group of students to utilize a library and its resources.
8. Teach an educational game to students.
9. Administer an objective test.
10. Listen to a student's individual report.

11. With the aid of the classroom teacher, select a student about whom you will gather information. This information would be taken from school records and should be kept strictly confidential. Together, the teacher and the CDA should discuss the information and its implications for both teacher and student in the school situation.

Required Experiences Sometime During the Career Decisions Program

The CDA should accomplish eight of the behavioral objectives listed and as many others as can be arranged.

1. Attend a team meeting (if you are in a team-teaching school), a departmental meeting, or a school board meeting.

2. Read a book, magazine, or article recommended by a student.

3. Listen to the top five popular songs and discuss with students.

4. Attend a school-sponsored activity (dance, athletic contest, pep session, etc.) and discuss with students.

5. Walk or stand within the immediate vicinity of the school at dismissal time in order to observe individual and small groups of students.

6. Request permission to observe a teacher's meeting or a Union meeting, or an association meeting.

7. Eat lunch with students.

8. Observe and participate in a physical education class.

9. Attend a club meeting.

10. If the school has vocational classes, visit as many of them as possible.

11. Observe a practice session of a school-sponsored athletic team.

12. Enter a student restroom between classes and during a lunch period.

13. Request permission to be an observer in one of the deans' offices for a period of time.

14. Discuss the kinds of problems adolescents encounter with a guidance counselor.

Roles and Responsibilities of Staff in non-Must Schools

This statement of Roles and Responsibilities is included to help the CDA understand the organization of a school.

Staff Responsibilities

Principal
- Assumes complete responsibility for the cooperation of the total school plant, including pre-service and in-service teacher education activities.
- Assumes major responsibilities for guidance and administrative leadership.
- Administers the research and development activities.
- Organizes and chairs building committee, arranges for its meetings and sets the agenda of the meeting.
- Organizes instruction and materials.
- Schedules time, space, and equipment.
- Secures the essential conditions for his staff to work effectively.

Teacher
- Assumes the major responsibilities for effective planning in the instructional areas.
- Provides instructional leadership.
- Assumes the responsibility for the most effective utilization of the teacher interns, participants and career decision aides.
- Identifies pupil needs and makes pupil assignments.
- Assumes the major responsibility for the evaluation of all activities.
- Guides and evaluates teacher interns, participants, and career decision aides.
- Has instructional responsibilities for both small and large group situations.
- Evaluates individual and group progress.
- Assumes responsibility for the instructional activities in his special areas of competencies.
- Assumes responsibility for record keeping for students.

Student Teacher
- Works closely with the teacher in planning, presenting and evaluating the instructional program.
- Works directly with an individual student or a group of students as assigned by the teacher.

- Performs any other instructional duties as assigned by the teacher in charge.
- Works closely with the teacher in the continuous evaluation of the students.
- Works cooperatively with the teacher on clerical work and general classroom housekeeping.

THE ORGANIZATION OF THE MULTI-UNIT SCHOOL

THE UNIT

The teachers in the multi-unit school work in units or committees rather than in the isolation that is characteristic of traditional self-contained classrooms. At the classroom level are the Instructional and Research (I & R) Units. Each I & R Unit has a Unit Leader or professional teacher, two or more regular staff teachers, one or more aides or secretaries, and in some cases a student teacher who assumes instructional responsibilities. Each unit is charged with planning and conducting the total school experience of 50 to 150 students.

Unit meetings are held at least once a week and often more frequently. A unit meeting may last from 30 minutes to a half day. The meetings are devoted to planning and evaluating the total instructional program for the children of the Unit and require the attendance of the certified members of the Unit. Generally they are held during school hours. The agenda, written or mental, is supplied by the Unit Leader.

INSTRUCTIONAL IMPROVEMENT COMMITTEE

At the second level of organization, the principal, unit leaders, supervisors of student teachers and the resident professor constitute the Instructional Improvement Committee. This group meets weekly to discuss curriculum improvement and school wide concerns. It discusses matters such as reporting practices, in-service programs, and new instructional material.

THE MULTI-UNIT SCHOOLS FOR TEACHER EDUCATION COMMITTEE

At the third level of the organization is the group called the M.U.S.T. Committee. It consists of a delegation from each participating school: the principal, the resident professor, and two teachers. Its purposes include improving teacher education and creating new multi-unit schools.

CHARACTERISTICS OF MULTI-UNIT SCHOOL

Several important basic components are required for the successful operation of a Multi-unit School.

1. First, whatever the number and size of Units, each Unit must plan, instruct and evaluate cooperatively.
2. In the Multi-unit School, important instructional decisions must be made by groups and at the appropriate level in the organization.
3. The Multi-unit concept presumes greater role differentiation and role clarity than is the case in the traditional school.
4. The Multi-unit concept rests upon a carefully designed leadership structure.
5. The work environment in the multi-unit school provides oral communication and horizontal and vertical channels open naturally.
6. The Multi-unit school is characterized by flexibility, cooperativeness, and a spirit of inquiry. Change is inevitable because professional inter-action requires it, and there is more time to plan, text and implement.

Glossary of Terms in the Multi-Unit School

This statement of Roles and Responsibilities and a Glossary of Terms is included to help the CDA understand the organization of a Multi-unit School.

Staff Responsibilities

Principal
- Assumes complete responsibility for the cooperation of the total school plant, including pre-service and in-service teacher education activities.
- Assumes major responsibilities for guidance and administrative leadership, initiating and refining the system of Individually Guided Education
- Administers the research and development activities
- Meets with entire Unit as requested by the Unit Leader.
- Organizes and chairs building committee, arranges for its meetings and sets the agenda of the meeting.
- Organizes instruction and materials.
- Schedules time, space, and equipment.
- Secures the essential conditions for his staff to work effectively.

Unit Leader or Team Leader
- Assumes the major responsibilities for effective planning in the instructional areas.
- Provides instructional leadership.
- Guides and coordinates the teaching and planning of the unit.
- Assumes the responsibility for the most effective utilization of the teacher interns, participants and career decision aides.
- Identifies pupil needs and makes pupil assignments (this is to be done through staff consultation)
- Assumes the major responsibility for the evaluation of all unit activities.
- Serves a chairman of unit meetings.
- Meets with entire unit at least once per week.

Teacher
- Shares in cooperative planning of lessons and units.
- Shares in cooperative planning and evaluation of the entire team program.
- Shares in guiding and evaluating teacher interns, participants, and career decision aides.
- Shares in instructional responsibilities for both small and large group situations.
- Shares in evaluating individual and group progress.
- Assumes responsibility for the instructional activities in her special areas of competencies.

- Assumes responsibility for record keeping for a designated group of students.
- Cooperates with unit in planning and developing better methods of instruction.
- Meets with entire unit at least once per week.

Student Teacher

- Works closely with the team in planning, presenting and evaluating the instructional program.
- Works directly with an individual child or a group of children as assigned by the unit teacher or unit leader.
- Meets with entire unit staff to plan and prepare the unit program.
- Performs any other instructional duties as assigned by the unit leader or teacher in charge.
- Works closely with the unit leader and teachers in the continuous evaluation of the children.
- Works cooperatively with the team on clerical work and general classroom housekeeping.

Glossary Continued

IDEA - Institute for Development of Educational Activities, Inc.

IGE - Individually Guided Education

IIC (or Building Committee)

- The Instructional Improvement Committee of the building is comprised of the building principal and Unit leaders. It meets at least weekly and makes decisions regarding the instructional program of research and development conducted within the building.

LEAGUE - The League is defined as being a functionary relationship between a number of schools for the accomplishment of some purpose by cooperating for mutual benefits.

R & D - Research and Development

MUST COMMITTEE

- Multi-unit Schools for Teacher-Education (Multi Unit Schools for Teacher-Education)

Multi-unit Schools - Toledo Board of Education Elementary Schools

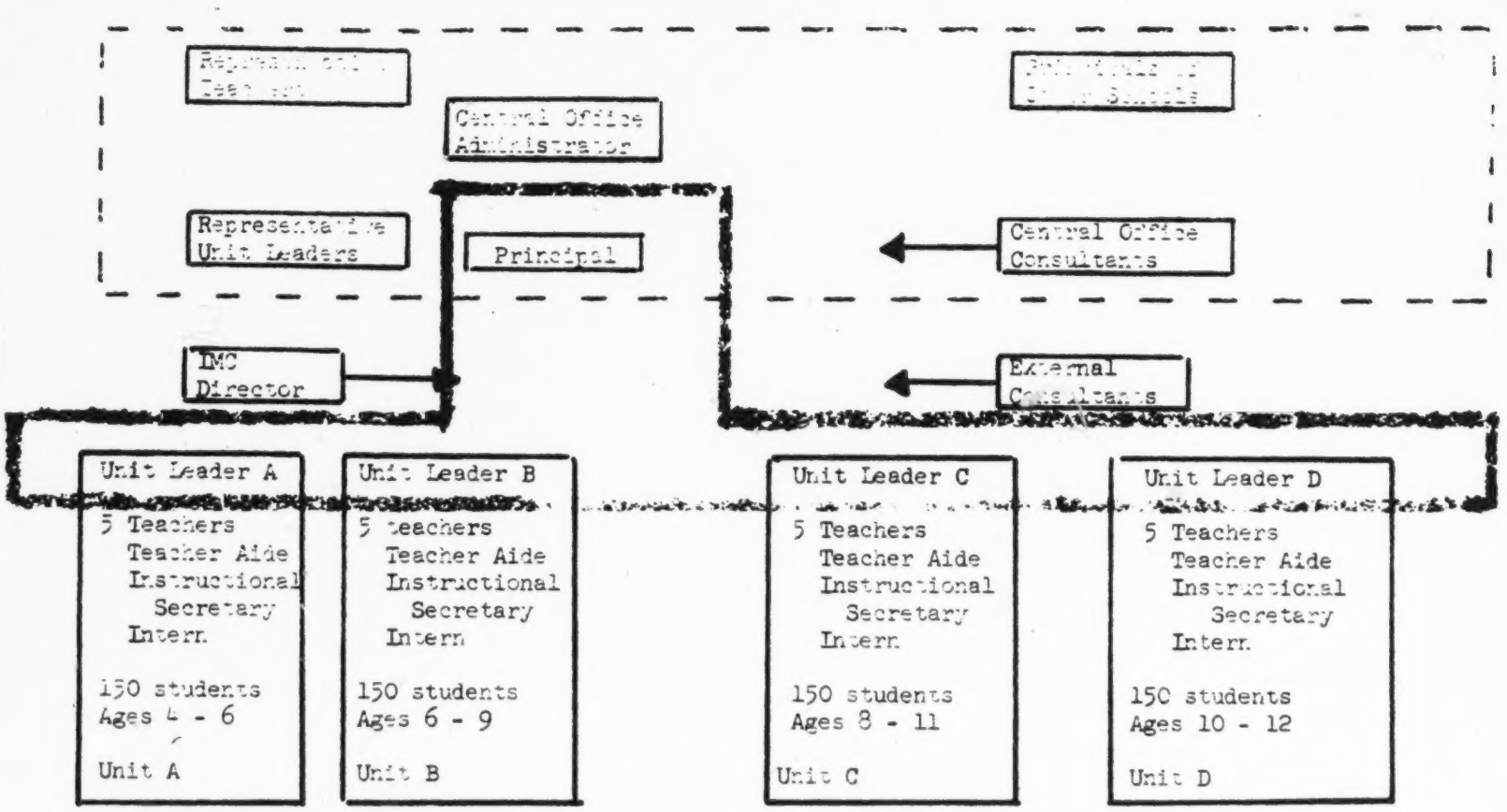
Glendale School, 2360 Glendale, 385-1641

Martin Luther King School, 1415 Lawrence, 243-7163

Old Orchard School, 2402 Cheltenham, 536-1261

Walbridge School, 1245 Walbridge, 243-4020

ORGANIZATIONAL CHART OF A MULTI-UNIT SCHOOL OF 600 STUDENTS



Building Instructional Improvement Committee

Multi-Unit Schools For Teacher Education Committee (M.U.S.T.)

LOCATION OF SCHOOLS IN AND NEAR TOLEDO

Toledo Board of Education, Manhattan and Elm Streets, Toledo, OH 43608
729-5111

Bowsher	3548 S. Detroit (14)
Devilbiss	3301 Upton Ave. (13)
Libbey	1250 Western Ave. (9)
Macomber	1501 Monroe St. (2)
Rogers	5539 Nebraska Ave. (15)
Scott	2400 Collingwood Blvd. (10)
Start	2061 Farragut (13)
Waite	Morrison Dr. at 2nd St. (5)
Whitney	1602 Washington St. (2)
Woodward	600 E. Streicher (8)

Arlington	700 Toronto Ave. (9)
Bancroft Hills	2630 Montbello Rd. (7)
Beverly	4022 Rugby Rd. (14)
Birmingham	Pain & Valentine Sts. (5)
Bowsher Jr. High	3548 S. Detroit St. (14)
Burroughs	2404 South Ave. (9)
Chase	3315 Mayo (11)
Cherry	3348 Cherry St. (12)
Crossgates	3900 Shady Lawn (14)
Deveaux	Sylvania Ave. & Rushland (13)
East Side Central	815 Navarre (5)
Edgewater	5549 Edgewater St. (11)
Elmhurst	4530 Elmhurst Rd. (13)
Fall-Meyer	1800 Krieger Dr. (15)
Feilbach	Stanley Ct. & Wilson Pl. (8)
Franklin	Oak & Fourth Sts. (5)
Fulton	333 Melrose (10)
Grove Patterson	3020 Marvin Dr. (6)
Garfield	Worthington & N. Ravine (5)
Glan	1700 N. Reynolds (15)
Glendale	4746 Glendale (14)
Glenwood	2860 Glenwood (10)
Gunckel	430 Nebraska Ave. (2)
Hamilton	E. Manhattan Elvd. (8)
Harvard	1949 Glendale Ave. (14)
Hawkins	5550 W. Bancroft (15)
Heather Downs	1932 Birchwood (14)
Jones	550 Walbridge Ave. (9)
Keyser	3900 Hill Ave. (15)
Kleis	5016 - 297th St. (11)
Lagrange	Lagrange & Erie Str. (04)
Larchmont	1515 Slater St. (12)

Lincoln	Detroit & Lincoln Ave. (6)
Longfellow	4112 Jackman Rd. (12)
Marshall	415 Colburn St. (4)
Martin	N. Holland-Sylvania (14)
Martin Luther King	934 Palmwood Ave. (17)
Mayfair	5331 Bennett Rd. (12)
Mount Vernon	825 Bryne Rd. (15)
McKinley	1901 W. Central Ave. (6)
McTigue	5700 Hill Ave. (15)
Nathan Hale	Foster & Shenandoah (7)
Navarre	410 Navarre Ave. (5)
Newbury	1040 Newbury St. (9)
Oakdale	Oakdale & E. Broadway (5)
Old Orchard	2402 Cheltenhem Rd. (6)
Ottawa River	4801 - 290th St. (11)
Parkland Crafts	300 Lagrange St. (8)
Pickett	Blum & Hoag St. (7)
Point Place	2859 - 131st St. (11)
Reynolds	500 Norwich (15)
Raymer	1419 Nevada St. (5)
Riverside	Ontario & Chicago (11)
Robinson	1007 Grand Ave. (6)
Ryder	3117 Nebraska Ave. (15)
Sherman	Sherman & Walnut Sts. (8)
Spring	Stickney Ave. (8)
Stewart	707 Avondale (2)
Spencer (Sharples)	Irwin Rd., Holland (43528)
Stickney	Stickney at Erie (4)
Walbridge	1245 Walbridge Ave. (9)
Warren	121 Irving St. (2)
Washington	514 Palmwood Ave. (2)
Westfield	Western & Field Sts. (9)
Whittier	4215 Walker Ave. (12)

OREGON SCHOOL DISTRICT - Victor Wood, Superintendent, 5721 Seaman, Oregon (43616), 693-0661 - Larry Morgan, Assistant Superintendent.

Clay H.	5721 Seaman (43616)
Eisenhower Jr.	North Curtice Rd. (43618)
Fassett Jr.	3925 Starr (43616)
Clay Elementary	5721 Seaman (43616)
Coy	2630 Pickle (43616)
Jerusale	Route 1, Yondota Rd., Curtice
Starr	3230 Starr (43616)
Wynn	5224 Bayshore (43616)
J.J. Shuler	4955 Seaman Rd.

PERRYSBU RG SCHOOL DISTRICT - Robert M. Pierson, Superintendent, 141 E. I ndiana, Perrysburg, Ohio 874-7908

Perrysbu rg H. S.	550 E. South Boundary (43551)
Perrysbu rg Jr. H.	140 E. Indiana (43551)
Elm Stre et	Seventh & Elm (43551)
Pine Str eet	W. & S. Boundary & Elm (43551)

SYLVANI A SCHOOL DISTRICT - Clyde Plant, Superintendent, 6801 Maplewoo d Ave., Sylvania, OH (43560).

Sylvanis South	5403 Silica (43560)
Sylvanis North	6850 Monroe (43560)
McCord J r. High	4304 McCord Rd. (43523)
Maplewoo d	6769 Maplewood (43560)
Central \venue	7460 Central (43617)
Hillvie	5424 Whiteford (43560)
Stranahs n	3840 Holland-Sylvania (43615)
Sylvan	4830 Wickford Rd. (43560)
Highlan	7720 Erie (43560)
Whitefor d	4708 Whiteford (43623)
Arbor Hi lls Jr. H.	5300 Whiteford (43623)

WASHINGT ON LOCAL SCHOOL DISTRICT - Homer S. Nightingale, Local Superint endent, Douglas Rd., Toledo, OH (43613) 473-3431, Harvey Davis, I irector of Personnel.

Whitmer	5601 Clegg (43613)
Washingt on Jr. H.	5700 Whitner (43613)
Jefferso n Jr. H.	5530 Whitmer (43613)
Hiawatha	Fern & Photos
Hopewell	5802 Jackman (43612)
Horace M ann	Sylvania & Harvest (43623)
Jackman	2010 Forthover (43613)
Lincolns hire	3505 W. Lincolnshire (43606)
Meadowv le	2755 Edgebrook (43613)
McGregor	3535 McGregor Lane (43623)
Monac	3845 Clawson (43623)
Greenwoo d	760 Northlawn Dr. (43612)
Shorelan d	Suder & E. Harbor (43611)
Trilby	5720 Secor (43613)
Wernert	5050 Douglas (43613)
Westwoo	3939 Wrenwood

NURSERY SCHOOLS

Hope Lutheran Nursery School (Hope Lutheran Church)	Indian and Secor Rds. (6)
Grasshopper Green Nursery School (St. Mathews Episcopal Church)	5240 Talmadge Rd.
Fairgreen Nursery School (Fairgreen Presbyterian Church)	3220 W. Laskey

PAROCHIAL SCHOOLS

St. Mary's School	219 Page
St. Patrick's School	4201 Heatherdowns
St. Jude's School	3650 Victory
St. Charles' School	1850 Airport

THE FOLLOWING INSTRUMENT WAS ADMINISTERED TO 103 STUDENTS WHO WERE ENROLLED IN THE INITIAL 101 SECTION OF CAREER DECISIONS DURING THE FALL OF 1971

Directions: Read each of the following questions and circle the appropriate response.

I. Part One: Evaluation of the Field Experience

To what extent:	Completely				Not at all
1. Were your field experience activities formulated by you?	1	2	3	4	5
2. Were your field experience activities formulated by the cooperating teacher?	1	2	3	4	5
3. Were your field experience activities satisfactory?	1	2	3	4	
4. Did you work with groups of students?	1	2	3	4	5
5. Did you work with individual students?	1	2	3	4	5
6. Did you perform clerical tasks (grade papers, etc.)?	1	2	3	4	5
7. Did you sit and observe in the classroom?	1	2	3	4	5
8. Did you work with instructional materials (films, bulletin boards, etc.)?	1	2	3	4	5

II. Part II: Evaluation of On-Campus Seminar

To what extent:	Completely				Not at all
9. Were class discussions relevant to the Career Decisions Program?	1	2	3	4	5
10. Were class discussions interesting?	1	2	3	4	5
11. Were class meetings discussion oriented?	1	2	3	4	5
12. Were handouts clear?	1	2	3	4	5
13. Were handouts concise?	1	2	3	4	5
14. Were handouts interesting?	1	2	3	4	5
15. Were handouts relevant to the Career Decisions Program?	1	2	3	4	5

	Completely				Not at all
16. Did the course objectives, around which the Career Decision Program is organized, help you know what tasks were expected of you?	1	2	3	4	

III. Part III: Additional Comments

17. List and describe the three most meaningful experiences you've had this quarter.

18. List three specific ways you would improve the program.

COMPILATION AND RESULTS OF STUDENTS' EVALUATION
OF THE CAREER DECISIONS PROGRAM

Student Evaluation Compilation

Part I: Field Experience

To what extent		Completely 1	2	3	4	Not at all 5	Total
1. Were your field experience activities formulated by you?	%	1%	25.4%	36.3%	21.8%	15.5%	(100%)
	#	(2)	(49)	(70)	(42)	(30)	(193)
2. Were your field experience activities formulated by the cooperating teacher?	%	19.4%	49.7%	25.1%	5.2%	.57%	(100%)
	#	(37)	(95)	(48)	(10)	(1)	(191)
3. Were your field experience activities satisfactory?	%	38.4%	34.7%	18.4%	6.3%	2.1%	(100%)
	#	(73)	(66)	(35)	(12)	(4)	(190)
4. Did you work with groups of students?	%	26.7%	40.3%	19.4%	6.8%	6.8%	(100%)
	#	(51)	(77)	(37)	(13)	(13)	(191)
5. Did you work with individual students?	%	22.5%	43.5%	17.8%	6.8%	9.4%	(100%)
	#	(43)	(83)	(34)	(13)	(18)	(191)
6. Did you perform clerical tasks (grade papers, etc.)?	%	18.3%	30.9%	20.9%	13.1%	16.8%	(100%)
	#	(35)	(59)	(40)	(25)	(32)	(191)
7. Did you sit and observe in the classroom?	%	14.8%	28.6%	25.4%	18.0%	13.2%	(100%)
	#	(28)	(54)	(48)	(34)	(25)	(189)
8. Did you work with instructional materials (films, bulletin boards, etc.)?	%	10.5%	25.7%	24.1%	16.2%	23.6%	(100%)
	#	(20)	(49)	(46)	(31)	(45)	(191)

Part II: Seminars

To what extent

9. Were class discussions relevant to the Career Decisions Program?	%	44.0%	34.6%	16.2%	4.2%	1.1%	(100%)
	#	(84)	(66)	(31)	(8)	(2)	(191)
10. Were class discussions interesting?	%	29.2%	39.1%	21.4%	7.3%	3.1%	(100%)
	#	(56)	(75)	(41)	(14)	(6)	(192)
11. Were class meetings discussion oriented?	%	33.2%	34.7%	25.8%	4.8%	1.6%	(100%)
	#	(63)	(66)	(49)	(9)	(3)	(190)

		Completely				Not at all	
12. Were handouts clear?	%	38.5%	42.7%	15.6%	2.6%	.5%	(100%)
	#	(74)	(82)	(30)	(5)	(1)	(192)
13. Were handouts concise?	%	39.0%	37.5%	17.7%	5.2%	.5%	(100%)
	#	(75)	(72)	(34)	(10)	(1)	(192)
14. Were handouts interesting?	%	15.1%	29.2%	37.5%	12.0%	6.3%	(100%)
	#	(29)	(56)	(72)	(23)	(12)	(192)
15. Were handouts relevant to the Career Decisions Program?	%	49.7%	33.9%	10.6%	5.3%	.5%	(100%)
	#	(94)	(64)	(20)	(10)	(1)	(189)
16. Did the course objectives, around which the Career Decision Program is organized, help you know what tasks were expected of you?	%	29.7%	48.4%	17.2%	4.2%	.5%	(100%)
	#	(57)	(93)	(33)	(8)	(1)	(192)

SUMMARY OF STUDENTS' RESPONSES

Field Experiences:

The vast majority of students felt that their field experience was satisfactory and that they were sufficiently involved in formulating their field experience activities. Unfortunately, however, some students believed that their cooperating teachers either completely dominated the formulation of the activities or provided no guidance at all.

The activities participated in represented a wide spectrum for most of the respondents with more students omitting mechanical and observational activities than student-related activities.

Seminars:

Most students felt that their seminar meetings were relevant to the entire Career Decisions Program and that most meetings were both interesting and discussion oriented.

The vast majority of respondents felt that the handouts used in the seminars and large group meetings were sufficiently clear, concise, and relevant to the program. While most students also agreed that the handout material was interesting, a sufficient number responded negatively to this item to suggest that an attempt should be made to raise the interest level of some reading materials.

Almost all of the respondents agreed that the course objectives, which students received at the beginning of the quarter, were of considerable aid in anticipating and understanding the tasks expected of them.

Student Comments:

The most commonly mentioned meaningful experiences that the students felt the Career Decision Program had provided them with were:

.The opportunity to interact with school children.

.The relationships developed with cooperating teachers.

.The opportunity to assume the teacher role.

.The seminar discussions--especially those that dealt with problems encountered in the "field."

The most commonly mentioned improvements that the students felt should be considered for the Career Decision Program were:

.Field experiences should be assigned solely on the basis of student choice as to subject area, specialty, and level.

.Implement a better orientation process for cooperating teachers.

.Increase the number and length of field experiences during the quarter.

.Allow more hourly credits for the program to lessen the class load of participants.

APPENDIX O

MISCELLANEOUS MEMORANDA

TO: COLLEGE OF EDUCATION FACULTY

FROM: Cass Gentry

RE: In Defense of Imperfect Instruction

Having assumed responsibility for a task, the conscientious professional we agree, will not be satisfied until he has met, at least, minimum requirements of that task. A major source of anxiety expressed by faculty working on the Elementary and Secondary program Model, is that most of the modules generated thus far, fall short of what our experience, our intuition, and the instructional development system we have adopted, tell us is adequate.

In making the decision to systematically develop the instruction for students in our elementary and secondary program, the faculty of our college assumed a task of enormous proportion. In fact, if we were to stipulate that each of the modules or components of the model were to meet minimum requirements for effectiveness, the task becomes impossible, given the time and resources available to us.

In effect, the alter ative of precisely analyzing, prescribing, piloting, evaluating, and revising instruction prior to implementation, is not open to us. Even if we had appropriate funding, the accomplishment of such an extensive interprise would require many additional faculty, as well as extensive support personnel. And time - a great deal of time.

A second alternative, while not as satisfying, is open to us, and it permits us to operate the instructional system almost at once with a minimum of resources. This second alternative is also systematic in its development of instruction, but it accepts approximations of the minimum requirements of the task. That is, each component of the system must still be dealt with, but the criteria for each component are met to varying degrees. For example, behavioral objectives may contain only the performance statement and lack the condition, or level statement. We may deal only with terminal objectives, ignoring enabling objectives, for the moment. Assessment instruments may have insufficient or token items. The means for accomplishing our objectives may, initially, be chosen because they are possible, rather than for their pedigogical qualities.

As one faculty member pointed out, the above conditions are not much different from those that exist now. There is one all-important difference, however. Our systematically deveolped approximations will be subject to continuous systematic revision.

In fact, as Dick Saxe has pointed out; "without the continuous, systematic, revision of our modules, we are merely trading one orthodixy for another," and we may as well continue with the alternative traditionally practiced in colleges of education.

Memo - College of Education Faculty

The first alternative with its stringent requirements, has implications of closure, of having finished something, and now being free to forget it (much the way students behave at the end of an algebra course). The second alternative, that permits us to accept approximations of effectiveness and efficiency of our instructional system, is viable only if the concept of closure is refuted. While an individual professor may have done with a module, the continuous revision component built into our system will assure that modules and their objectives are refined on the basis of their effects on students.

Critical operational factors must obviously be dealt with if our alternative of successive approximations is to be successful. Any revision component must necessarily contain a means of collecting data on the effects of a module, of assessing that data, and of making changes in the module as a result of that assessment.

The development of modules and the policies controlling them, must be given the most careful attention of the faculty. If principles of academic freedon are to be served, the faculty clearly must maintain control of the criteria of assessment, and how such findings are applied. Faculty must maintain the right to select the means for accomplishing objectives in their classes, and individual faculty must maintain the privilege of going beyond those objectives established by the college faculty for modules. The attendant question, once the revision data is available, asks who will revise the modules? Most of our modules have input from several faculty, a stimulating condition. Will this continue into revision? What about released time for faculty who need to revise defective modules? The questions go on. That each of them can be met and answered is not doubted, but there are alternative answers, and while some answers solve short-term problem, they may create long-term problems that markedly reduce their immediate value.

The point is, if we are to be successful in developing meaningful, effective instruction, and in maintaining an open academic community, we must each consider these critical alternatives carefully. This does not mean that we wait for perfect solutions for each problem, there will obviously be many occassions for compromise, but that we monitor all decisions in light of their effect upon our students and our professional lives. We have selected a strategy for accomplishing important goals. If any part of that strategy is inefficient, ineffective, or antithetical to those goals, we must have the flexibility and control to change the strategy as well as its products.

Some SUPER IMPORTANT INFORMATION concerning ALL
Secondary Model Participants

Yes, this is one in a continuing series of notes related to the STAMP process (Sequence These Aggravating Modules Please)!

As you recall from our meeting on Friday, several teams were formed (we had to turn away at least 52 volunteers) to STAMP. From each of these teams an expert modulator agreed to guide the team in its task. This task has been task analyzed into enroute or enabling objectives which will have to be accomplished in order that teams reach criterion (or get a STAMP approval).

1. Decide and list modules to be eliminated and/or combined with others.
2. List those modules which need revision and who will revise them.
3. Readjust module sequence if necessary.
4. List any new modules which need to be written and who will write them.
5. Write estimated time requirements for modules.
6. Insure that all modules have specific pretest and posttest procedures and/or items.

Attempting to be consistent with the precepts of instructional systems design it was decided to establish a time to completion consistent with the most probable time of completion. After careful deliberation in which all past performance data was fed into the computer, we arrived at this most probable time of completion:

Either

a) When the Paris peace talks are successful;
b) When one can swim instead of walk in Lake Erie;
or
c) 1984, whichever comes first!

We have taken the liberty to assume that these alternatives are not acceptable. Instead, does it sound reasonable that teams meet these objectives (or at least most of them) by 26, April.

Your reward will either be that glow you feel for contributing to the welfare of humanity or escaping our pesty interference.

In closing let me leave you with these words of R. C. Ettinger, who is spearheading the study of "Cryonics," (deep freezing the newly dead until a cure for maladies can be found). After careful study of the process and a survey of possible participants, he said shudderingly, "that many are cold, but few are frozen."

Automation of Date Collection, Analysis, Reporting, & Storage

Types of Data:

Student & Faculty entry behaviors (individual & group characteristics)

Pretest scores

Posttest scores

Attitude scale scores

1. Objectives for Automation System
   a. to provide immediate feedback of results to students & faculty in terms of objectives successfully or unsuccessfully met.
   b. to provide faculty with data concerning parts of modules students are having difficulty with:
      1) error rate
      2) item analysis
      3) time study (efficiency of modules or parts of modules)

2. Sequence of events:
   a. Determine the assessment data required
      1) student and faculty entry behaviors (individual and group)
      2) pretest scores
      3) posttest scores
      4) attitude scale scores

   b. Determine mechanism for collecting data
      1) student will enter data on machine readable cards where objective test items are used
      2) Faculty or assistants will enter data on machine readable cards where subjective test items are used

c. Input Machine readable data into computer, which will provide:

1) item analysis of test items

2) effectiveness profiles, and efficiency profiles in terms of:

a) entry behavior, sex, achievement level, learning style, motivation level, age, major, teaching methods, team, specific objectives, means, sequence problems, reinforcement, student attitudes, group size (large group, small group, tutorial, independent, . . .)

d. Provide data analysis readouts to faculty for revision purposes

3. Equipment required:

a. Test scoring machine that can read test answer cards or sheets

1) student can use the scoring machine

2) scoring machine will provide student with KOR on which items missed, and relate the missed items to the appropriate objectives, and the means used to teach the objectives.

3) scored cards are collected for computer analysis

b. Computer terminal or input device for interfacing scored card data and other inputs with computer data analysis program

c. Computer terminal or output device for providing readout analysis data for faculty

d. Machine that will make multiple copies of readout analysis for faculty (IBM Ditto Masters?)

e. Data storage (computer, and manual)

4. Programs required

   a. instructional programs

   b. test scoring program

   c. test analysis program

   d. equivalent exam, and student specific exam generation program

   e. individual and group activities scheduling

      1) students

      2) faculty

      3) time

      4) space (room size, furniture, and equipment required)

ELEMENTARY AND SECONDARY MODEL SEQUENCING STRATEGY

I. **Problem:** recognizing that any initial sequence adopted for the modules making up our program, will be subject to change as we gain objective data resulting from our Fall 1972 implementation, we are still in need of a rational and consistant plan for the initial sequence.

II. Proposal subject to modification and acceptance by faculty:

1. Categorize modules by instructional development stages, and by Taxonomic levels (see attached Matrix A). While there are obvious exceptions to the logic implied in this matrix for sequencing modules (i.e., all modules do not fit neatly into the categories, and it is not always pedegogically sound to move from low-level categories to sophisticated categories), the rules for sequencing are clear, and the rationale for placement of each module can be questioned.

2. Sequence modules within Taxonomic levels, on the basis of concurrent, successor or predessessor relationships among the modules. Decisions would be made by determining the effect one module has on another. If the behaviors taught by one module are essential before a student learns the behaviors in a second, then the first module would precede the second. If there appears to be no prerequisite relationship, they may be learned concurrently, or ordered to meet student or administrative convenience.

3. Estimate the number of hours required for each module (Both professor's and student's time). This information will help determine the number of modules placed in a particular quarter, and to determine faculty and student load.

4. Place modules in a particular term. Roughly, this placement would be accomplished by dividing the module sequence into thirds in terms of teaching and learning time estimates. (excluding the carreer decision modules, and student teaching modules). So, if hypothetically, the total number of hours for the intite program was 180, then each term would be allocated approximately 60 hours.

5. Determine Faculty who will teach particular modules. To the degree possible, this would be decided by faculty interest and competency. Other constraints, like load limits, and released time for revision and instructional development, will make it necessary to compromise.

6. Determine precise meeting times for teaching and learning particular modules, or module clusters, within the term. This does not exclude the possibility of arranged times, or for continuous instruction as would be possible with self-instructional modules.

7. Determine type of meeting space required for a module or cluster of modules. From initial inspection of our modules, it is clear that the spacial requirements vary, at least, from large group, to small group, to individual needs. Along with the space concern is the requirements for furniture, and instructional equipment and materials. Given our current level of resources, we will undoubtedly have to adapt our program to traditional spaces, furniture, materials and equipment, but to the degree we are able to list and justify special conditions, will we be able to make plans for approaching those conditions over time.

MATRIX A: INITIAL SEQUENCING STRATEGY

It is assumed that all modules can be matched, in terms of their purpose, with the instructional systems, and taxonomic categories of the Matrix. It is also assumed that the order of instruction should move from the knowledge level of the taxonomic hierarchy in the direction of higher levels, so that placement of the modules will provide a rough, but justifiable sequence. It is further assumed that the resulting sequence will change as a result of assessment data resulting from implementation in the Fall 1972.

Instructional Systems Categories

TAXONOMIC CATEGORIES	Determine goal	Determine & sequence B.O.'s	Determine instructional	Execute means	Determine effectiveness of system	Determine revisions
Knowledge						
Comprehension						
Application						
Analysis						
Synthesis						
Evaluation						